Profile of Antenatal Women attending Urban Health Centre, Khasbag, Belgaum

Ashwini S.[1], Shivaswamy M.S. [2], Katti S. M.[3], Mallapur M. D. [4]

[1]Post graduate, [2]Professor, [3]Professor and Head, [4]Lecturer in Statistics,
Department of Community Medicine, J. N. Medical College, Belgaum - 580010, Karnataka, India.

Abstract

Background : About half a million women die every year of causes related to pregnancy and child birth. Most important determinant of maternal death is non-utilization of good quality health care services. In this study we have tried to analyze the extent of utilization of maternal and child health services in an Urban Health Centre of Belgaum.

Aim : To study the profile and pregnancy outcome of antenatal women attending Urban Health Centre, Khasbag, Belgaum.

Materials and Methods : A retrospective analysis of 278 antenatal women was done. Antenatal women who had their expected dates of delivery from April 2004 to March 2011 were included in this study. Maternal socio-demographic profile and antenatal profile was collected.

Results : A total of 38% were married before the legal minimum age of 18 years and 14% had their first pregnancy at this age itself. Nearly about half of women had only 2 antenatal visits and were registered for the first time between 16 to 28 weeks of gestation (43.4%). About 5.4% of women were multigravidae. Spacing of births was found to be less than 2 years in 25.2% of mothers and 81.4% had not used any kind of spacing method. Prevalence of anemia was 79.4%. Majority of the women had received a complete course of TT injections (98.4%) and most delivered in a hospital (97.9%). Among the women who had 2 or more live births only 46.2% opted for tubectomy.

Conclusion : Utilization of MCH services need to be improved in terms of early registration, number of antenatal visits and utilization of family planning services.

Key words : Antenatal care, maternal and child health services

Introduction

Worldwide, 1500 women die from pregnancy and child birth related complications every day. Majority of these deaths occur in developing countries and most of these are avoidable as well. A woman's life time risk of maternal death is 1 in 7300 in a developed country, whereas it is 1 in 75 in a developing country. Hence millennium development goal 5 is committed to reduce maternal mortality rate by three quarters from 1990 to 2015. Unfortunately it has been reduced only by 5% from 1990 to 2005 [1].

Access to family planning services is the foremost step to prevent maternal death by avoiding unwanted pregnancy. Appropriate care during antenatal period to those women who wish to conceive and continue the pregnancy is an equally important step. Health care solutions to prevent and manage most of the antenatal and intra-natal complications are well known today, but these complications are not predictable if a woman is not followed up during her antenatal period. With the spread of modern health care system, excellent antenatal and delivery services can be obtained. However, there are many constraints in utilizing them such as fees required to be paid, lack of physical access and most importantly lack of awareness about the need for a care during pregnancy [2]. In order to overcome these constraints, government hospitals and primary health centers provide free antenatal and delivery services, female health workers visit houses , identify pregnant women, provide antenatal, delivery and postnatal services at home to the extent possible besides educating the women regarding the importance of an appropriate antenatal care.

Despite all these efforts utilization of antenatal and delivery services is still suboptimal. This study makes an attempt to assess the extent of utilization of antenatal services provided by an urban health centre in Belgaum and factors influencing it.

Materials and methods

A facility record based analysis of 278 antenatal women attending the Urban Health Centre was done. Antenatal women who had their expected dates of

Address for correspondence
Dr. Ashwini S, A-12/16, Doctors' Quarters, J. N. M. C campus, Nehru Nagar, Belgaum - 580010, Karnataka, India.
E-mail : ashwini2184@gmail.com

delivery from April 2004 to March 2011 were included in this study. Maternal socio-demographic profile like age, education and occupation were noted. Obstetric history – age at marriage and at first pregnancy, number of living children, birth spacing, past history of any still birth or abortion, high risk factors, gestational age at registration, number of antenatal visits and number of tetanus toxoid injections taken were obtained from the antenatal case sheets. Haemoglobin percentage was taken from the women's laboratory record. Place of delivery, outcome of the pregnancy, spacing method used after delivery and the status of the child at present were enquired from the mothers themselves and the Anganwadi workers. Mothers were enquired about permanent family planning methods opted and the reason for not opting any. Final analysis was done for 242 women, excluding 36 women, whose data were incomplete.

Percentages and associations by Chi square test were done using SPSS 18 trial version.

Results

It is important to note that many of the antenatal women were literates (91.3%). At the same time, 38.0% of the women were married at the age of 18 years and 14.0% had their first pregnancy even before the completion of 18 years (Table 1).

Table 1. Demographic profile of antenatal women

	Number of antenatal women	Percentage
Educational status		
Illiterate	21	8.7
Literate	221	91.3
Occupational status		
Employed	13	5.4
House wife	229	94.6
Age at marriage		
15 to 18 years	92	38.0
18 to 20 years	93	38.4
More than 20 years	57	23.5
Age at first pregnancy		
15 to 18 years	34	14.0
18 to 20 years	90	37.2
20 to 25 years	103	42.6
More than 25 years	15	6.2

Table 2. Antenatal care

	Number of antenatal women	Percentage
Gestational age at registration		
<16 weeks	103	42.6
⩾16 weeks	137	57.4
Number of antenatal visits		
<3	170	70.3
⩾3	72	29.8

Nearly about half of women had only 2 antenatal visits and were registered for the first time at 16 to 28 weeks of gestation (43.4%) (Table 2). About 5.4% of women were multi-gravidae. Spacing of births was found to be less than two years in 25.2% of mothers. Prevalence of anemia was 79.4% and 5 out of 242 women (2.1%) were severely anaemic (Figure 1).

81.4% of women had not used any kind of spacing method (Figure 2). Among the women who had two or more live births, 46.2% opted for tubectomy and 53.8% did not opt (Figure 3); commonest reason for not undergoing tubectomy being no child aged five years or more, followed by want of a male child.

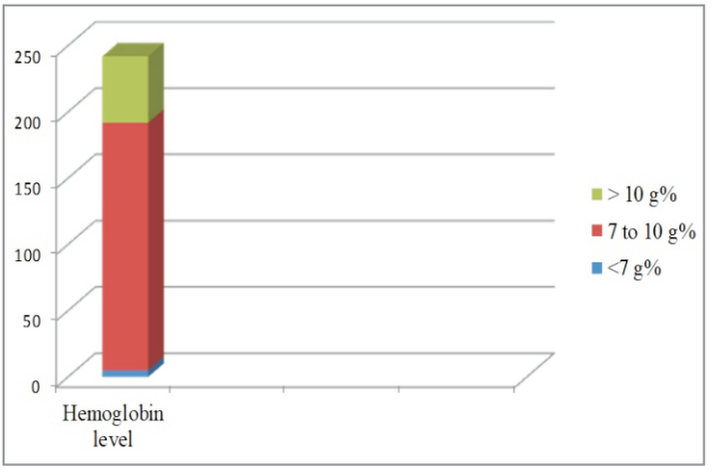

Figure 1. Hemoglobin level of antenatal women

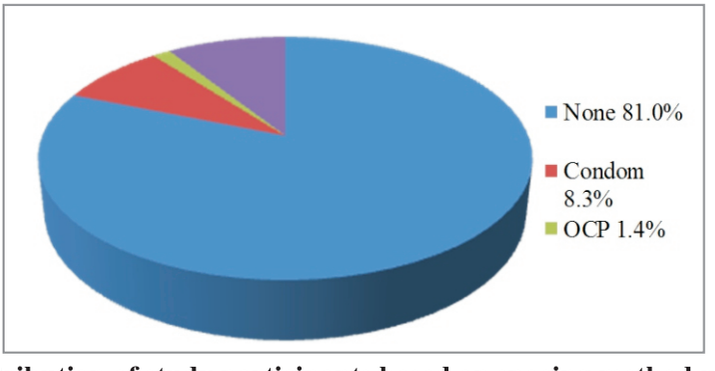

Figure 2. Distribution of study participants based on spacing method used (n = 242)

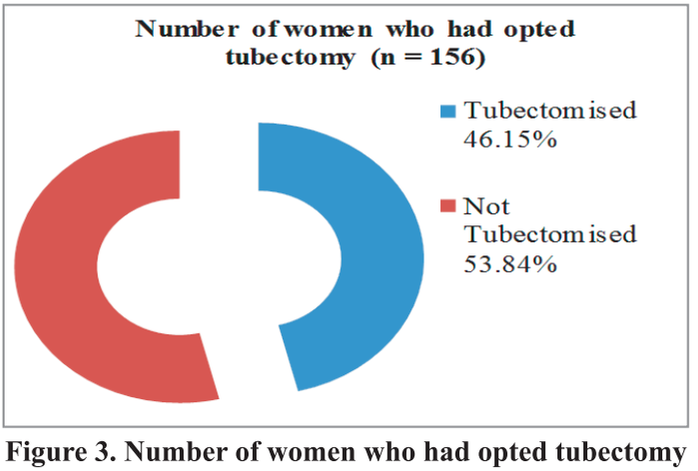

Figure 3. Number of women who had opted tubectomy

Many pregnant women had received a complete course of TT injections (98.4%) and delivered in a hospital (97.9%). Significant associations were found between education and age at marriage (p = 0.002), age at first pregnancy (p = 0.000) and number of antenatal visits (p = 0.02). Educated women were more likely to marry later, have first pregnancy later and have more number of ante-natal visits (Table 3,4,5).

Table 3. Association between education and age at marriage

		Age at marriage			Total	p value
		15 - 18 years	19 - 20 years	21 - 25 years		
Education	Illiterate	13	6	2	21	
	1st to 5th standard	21	13	5	39	
	6th to 10th standard	53	56	36	145	0.002
	PU/Diploma/ Graduate/ PG	5	18	14	37	
Total		92	93	57	242	

Table 4. Association between education and age at first pregnancy

		Age at first pregnancy			Total	p value
		15 - 18 years	19 - 20 years	21 - 25 years		
Education	Illiterate	7	6	8	21	
	1st to 5th standard	13	11	15	39	
	6th to 10th standard	14	62	69	145	0.000
	PU/Diploma/ Graduate/ PG	0	11	26	37	
Total		34	90	118	242	

Table 5. Association between education and number of antenatal visits

		No of ANC visits			Total	p value
		1	2	3+		
Education	Illiterate	9	9	3	21	
	1st to 5th standard	8	15	16	39	
	6th to 10th standard	44	65	36	145	0.02
	PU/Diploma/ Graduate/ PG	4	16	17	37	
Total		65	105	72	242	

With increase in number of pregnancy, number of antenatal visits decreased, birth spacing increased. Hence, significant association is found between number of pregnancy and number of antenatal visits (p = 0.000), birth spacing (p = 0.000), spacing method used (p = 0.000) (Table 6,7,8).

Table 6. Association of number of pregnancies and number of antenatal visits

		No of ANC visits			Total	p value
		1	**2**	**3+**		
Gravida	1	2	73	25	100	0.000
	2	42	22	30	94	
	3	13	9	11	33	
	4	8	1	6	15	
Total		65	105	72	242	

Table 7. Association between number of pregnancies and birth spacing

		Birth spacing				Total	p value
		Not applicable	<2 years	2-3 years	>3 years		
Gravida	1	100	0	0	0	100	0.000
	2	6	43	30	15	94	
	3	1	12	8	12	33	
	4	1	5	2	7	15	
Total		108	60	40	34	242	

Table 8. Association between number of pregnancies and spacing method used

		Spacing method used			Total	p value
		None	Condom	IUCD		
Gravida1	1	100	0	0	100	0.000
	2	67	14	13	94	
	3	21	7	5	33	
	4	10	1	4	15	
Total		198	22	22	242	

Discussion

According to NFHS 3 report, more than half of women are married before the legal minimum age of 18 years [3], which is more than that found in our study. The probable reason for this could be higher rate of literacy in our study population. Studies have shown that maternal education is a very strong and consistent predictor of utilization of antenatal services. About half of illiterate women obtain antenatal care as opposed to 79.1% of literate women utilizing it [4]. Women with secondary education are 2 to 3 times more likely to have antenatal care than women with no education [5]. It has also been observed that 75.1% of illiterate women delivered at their homes [6]. Present study also proves significant associations between maternal educational status and age at marriage, at first pregnancy and number of antenatal visits, which are some of the most important determinants of maternal death.

A study done in an urban health centre of Kolkata in 2003 showed that the coverage of TT injection during antenatal period was 80% [7]. Another study done in Karnataka in 2000 showed that it was 70.6% [8]. In the present study it was 98.4%, which can again be attributed to high literacy rate and probably due to easy physical access to urban health centre in Khasbag as well.

As per NFHS 3, prevalence of contraceptive use was 56% [3]. In the present study it was as low as 19%. Education alone could not improve the use of spacing methods. Other probable determinants for contraceptive use such as socioeconomic status, educational status of the husband, influence of other family members, family planning counseling given during postnatal period were not studied.

Prevalence of anemia was as high as 79.4% in the present study population. Limitation of this study is that the most important factors influencing the hemoglobin status of a pregnant woman – compliance to iron and folic acid tablets and nutritional intake during pregnancy could not be analysed. Further studies are recommended to know the reasons for low prevalence of contraceptive use and high prevalence of anemia.

Though utilization of antenatal services is satisfactory in terms of TT vaccination, place of delivery and personnel conducting delivery, improvements need to be made in terms of early registration, number of antenatal visits and utilization of family planning services.

References

1. Maternal mortality fact sheet. Accessed on 14th September 2011. Available at : http://www.who.int/making_pregnancy_safer/events/2008/mdg5/factsheet_maternal_mortality.pdf
2. Sivakami M. and Kulkarni P. M. “Are socially and economically weaker sections deprived of Maternal Health Care in Tamil Nadu?” Journal of Health and Population in Developing Countries. 07 August 2003, Page No. 66.
3. National Family Health Survey - 3, 2005 - 06. India. International Institute of Population Sciences. Mumbai. Accessed from www.nfhsindia.org on 14th September 2011.
4. Govindasamy, P. and B.M. Ramesh. 1997. Maternal Education and the Utilization of Maternal and Child Health Services in India, National Family Health Survey Subject Reports, Number 5. Mumbai, India: International Institute for Population Science and Calverton, USA: Macro International Inc. Accessed from www.nfhsindia.org on 14th September 2011.
5. Antenatal care in developing countries: promises, achievements and missed opportunities. WHO/UNICEF 2003. Accessed on 14 September 2011. http://www.who.int/reproductive_health/global_monitoring/data.html.
6. Singh P, Yadav RJ. Antenatal care of pregnant women in India. Ind J Comm Med 2000; 25 (3): 112-7.
7. Banerjee B. Maternal Care Rendered at an Urban Health Centre of a Metropolitan City. Ind J Comm Med 2006; 31(3): 183-4.
8. Navaneetham K, Dharmalingam A. Utilization of Maternal Health Care Services in South India. October 2000. Accessed on 14 September 2011. Available at http://ideas.repec.org/p/ind/cdswpp/307.html

Source of funding - Nil
Conflict of interest - None declared