

Original article

Determinants of utilization of antenatal care services in rural area of Bangladesh

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Abstract

Appropriate ante-natal care services promote safe motherhood and delivery with improved maternal and neonatal outcome. This population based cross sectional descriptive study was carried out to determine the utilization of antenatal care (ANC) services in a rural community of Bangladesh. Out of the 112 women studied, 63.4% mothers were found to receive antenatal care. Among them one third (32.4%) took it more than 4 occasions, 34(47.8%) pregnant women received antenatal care from government hospitals, 19(27%) from family welfare centre, 6(8.5%) from satellite clinics and around 12(17%) received from private hospitals. Around 71% mothers received ANC service from doctor while 17% mothers received from trained professionals. Seventy four percent mothers received tetanus (TT) injections. Only one fourth (25.3%) mothers had not received it. On an average, 90% mothers received iron tablets during their pregnancy. Regarding five danger signs during pregnancy, it was found that, 58.9% mothers were not aware about the five danger signs and 29.5% respondents knew about all the danger signs. Association between educational status and treatment seeking behaviour for pregnancy complication was found to be statistically significant ($p < 0.05$). However, association between educational status and place of treatment for pregnancy complication was also found significant ($p < 0.01$). Intensive awareness programme, behavioural change interventions and regular pregnancy monitoring may promote antenatal care service utilization in rural Bangladesh.

Key words: Ante-natal care, pregnancy complication, rural Bangladesh.

Introduction

Pregnancy and childbirth is a normal physiological phenomenon. Improving maternal health is one of the health-related millennium development goals (MDG).¹ Globally, each year, an estimated 358,000 women die because of complications during pregnancy and childbirth.^{2,3} The absolute figure of maternal mortality is only the tip of the iceberg; behind each death lies a huge burden of life-threatening and chronic morbidities.⁴⁻⁶

Every year, 7 to 8% of pregnant women suffer acute maternal complications resulting in about 9 million morbid events.^{3,7} In Bangladesh, an estimated 6,000 women die from pregnancy-related complications every year⁸ while another 194,000 women reportedly suffer injuries or disabilities caused by complications during pregnancy and childbirth.⁹ World Health Organization now recommends a 4-visit ANC schedule for low risk pregnancies.¹⁰ Ante-natal care (ANC) services indirectly saves the lives of mothers and babies by promoting and establishing good health before childbirth and the early post-natal period. It often presents the first contact opportunities for a pregnant woman to connect with health services, thus offering an entry point for integrated care, promoting healthy home practices, influencing care-seeking behaviours and linking women with pregnancy complications to a referral system; thus impacting positively on maternal and foetal health.¹¹ Currently, 71% of women worldwide utilizes ANC services; and in industrialised countries 95%, South Asia 54% and Sub Saharan Africa 64%.¹² Studies in developing countries have shown that the use of health-care services is related to the availability, quality and cost of services, as well as to the social structure, health beliefs and personal characteristics of the users.¹³⁻¹⁵ In order to increase the uptake of antenatal care services in a community, we need to understand the factors that underlie the decision of a pregnant woman to utilize this services. This is especially important in rural areas where 64% of Bangladeshi population resides.¹⁶ This study, therefore, set out to assess the utilization of ante-natal care services and identify factors associated with it in a rural community of Bangladesh.

Methods

This population based cross sectional descriptive study was carried out to assess the utilization of ante-natal care

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services and identify factors associated with it in a rural community of Bangladesh. The study was conducted over a period of 4 months from May to August 2012 in Dasmina Upazilla at Patuakhali district of Barisal division. Women residing in the study area who delivered within last 24 months were included in the study population which was 112. Convenient sampling technique was adopted to select the sample of population. Face to face interview of the participants were conducted with a semi-structured, pre-tested questionnaire consisting of socio-demographic characteristics and variables related to pregnancy & care seeking behaviour. The data were collected, checked & verified from fully completed questionnaires only. The analysis was carried out with the help of SPSS (Statistical Package of Social Science, version-16) windows software program.

Results

Out of 112 respondents, 92(82%) mothers were in the age group of 20-30 years followed by 15(13.4%) mothers at the age of more than 30 years. Regarding educational status, 82 (73.2%) completed primary education followed by illiterate 24 (21.4%). Almost all respondents (99.1%) were house wives. Regarding educational status of husbands, 43(38.4%) were day labourers, 17(15.2%) were farmers, 21(18.8%) were service holders & 20(17.8%) were businessmen. and 11(9.8%) were engaged in other occupation. Regarding monthly family income, 52 (46.4%) respondents had monthly family income of Tk. <5000, 52 (46.4%) had monthly family income of Tk. 5000 – 10000 and 08(7.2%) had Tk. 10000 or more. Average monthly family income of the respondents was taka 5500(±3063.15). (Table-I)

Table-I: Socio demographic characteristics of the respondents

Age		Occupation (Husband)		Monthly income (Taka)		Education	
<20 years	05 (4.5%)	Day labourer	43(38.4%)	<5000	52(46.4%)	Illiterate	24 (21.4%)
20 -30 years	92 (82.1%)	Farmer	17(15.2%)	5000-10000	52(46.4%)	Primary	82 (73.2%)
		Service holder	21(18.8%)	>100000	8(7.2%)	Secondary	06 (5.7%)
>30 years	15 (13.4%)	Business	20(17.8%)	Mean=5500			
Mean – 25.05,	SD (±) 4.33	Others	11(9.8%)	SD=(±)3063.15			

Six out of ten (63.4%) mothers were found to receive ante natal care. Among them one third (32.4%) took it more than 4 occasions (recommended number of visit). 34(47.8%) pregnant women received ANC from Government hospitals, 19(27%) from FWC, 06(8.5%) from satellite clinics and around 12(17%) received from private hospital. Around 71 % mothers received

ANC service from doctors. Around 17% mothers could not avail doctors and received ante natal care from trained professionals. Seventy four percent mothers received tetanus (TT) injections. Only one forth (25.3%) mothers had not received it. On an average, 90.1% mothers received iron tablets during their pregnancy and rest of them did not. (Table-II & Table-III)

Table-II: Distribution of antenatal care information among the respondents

ANC (n=112)		Place of ANC (n=71)		Care provider	Number of ANC visit
Done	71(63.4%)	Govt. Hospital	34(47.8%)	Doctor 51(71.8 %)	< 4 times 17 (23.9 %)
Not done	41(36.6 %)	Private hospital	12(16.9%)	Nurse/Paramedics 8	4 times 31 (43.7 %)
FWC	19 (26.8 %)	Satellite clinic	6 (8.5 %)	FWV 12 (16.9 %)	> 4 times 23 (32.4 %)

Table-III: Treatment received in ANC

Received iron/folic acid	Yes 64 (90.1%)
	No 7 (9.8 %)
Received TT vaccination	Yes 53 (74.6%)
	No 18 (25.3%)

Regarding five danger signs during pregnancy, it was found that 58.9% mothers did not know about the five danger signs and 29.5% respondents knew about all the danger signs. Among them, 40.2% had knowledge about excessive bleeding as a danger sign, 30.4% about high fever and 29.5% about blurring of vision, prolong labour and convulsion respectively as a danger sign. (Figure-1)

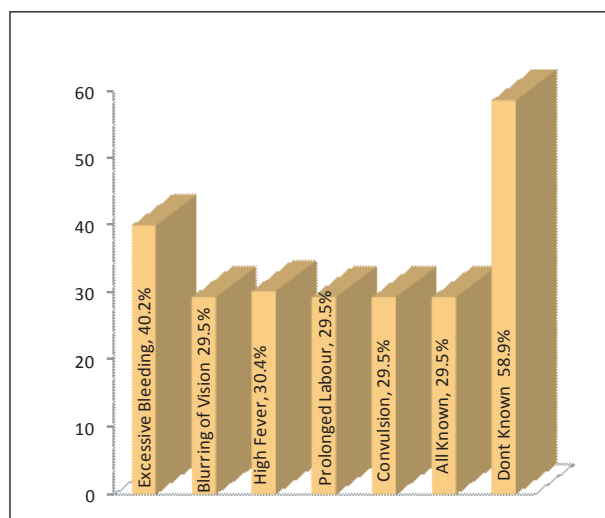


Figure-1: Knowledge about 5 danger signs of pregnancy among the respondents (n = 112)

Association between educational status and treatment seeking behaviour for pregnancy complication was found to be statistically significant (P<0.05). However, association between educational status and place of treatment for pregnancy complication was also found significant (P<0.01).

Discussion

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 which affects the utilization of ANC services.¹⁷ Therefore,

the study observed the determinants of utilization of antenatal care services i.e. ANC visits for pregnancy, iron receiving to prevent from anaemia and receiving TT vaccine to prevent from maternal and neonatal tetanus in rural area. The results of the present study showed that, out of 112 respondents, 92(82%) were in the age group of 20-30 years followed by 15(13.4%) at the age of more than 30 years. The study reveals that ANC visits of literate mothers were significantly higher than the illiterates. Almost all respondents (99.1%) were house wives and only one was service holder. Among husband's occupation 43(38.4%) were day labourers, 17(15.2%) were farmers, 21(18.8%) were service holders, 20(17.8%) were businessmen and 11(9.8%) were engaged in other occupation. Average monthly family income of the respondents was taka 5500 (±3063.15). High family income of mothers had the highest percentage use of ANC services compared to those with a lower family-income. Studies in Bangladesh,¹⁸ Tamil Nadu (India)¹⁹ and Indonesia²⁰ reported that monthly family-income had a positive influence on postnatal check-ups.

Six out of ten (63.4%) mothers were found to receive ante natal care. Among them one third (32.4%) took it more than 4 occasions (recommended number of visit). 34(47.8%) pregnant women received ANC from Government hospitals, 19(27%) from FWC, 06(8.5%) from satellite clinics and around 12(17%) received from private hospital. Around 71 percent mothers received ANC service from doctor while 17 % mothers received from trained professionals. Tetanus toxoid injections were given during pregnancy for the prevention of neonatal tetanus, a major cause of death among infants. For full protection, a pregnant woman should receive at least two doses of TT Vaccine during each pregnancy. Five doses are considered to provide lifetime protection.²¹ In this study seventy four percent mothers received tetanus (TT) injections. Only one fourth (25.3%) of the mothers had not received it. A study conducted in rural area of Nepal where nine out of every ten participants had taken iron and folic acid tablet (IFA)²² which is similar in the present study findings.

Regarding five danger signs during pregnancy, ante-partum haemorrhage followed by low abdominal pain, including severe headache, oedema, eclampsia, etc., were perceived to be the most frequently observed danger signs.²² Similar findings were reported from the focus group discussions and findings of this study concurred with the study conducted in Uganda where 52% of women knew at least one key danger sign during pregnancy.²³ But in the present study, it was observed

that, 58.9% mothers did not know about it and 29.5% knew about all the danger signs. These findings were not comparable because of data were collected from a rural setting.

Association between educational status and treatment seeking behaviour for pregnancy complication was found to be statistically significant ($P < 0.05$). However, association between educational status and place of treatment for pregnancy complication was also found significant ($P < 0.01$). It is well recognized that mother's education has a positive impact on health care utilization. In a study in Peru using DHS data, Elo²⁴ found quantitatively important and statistically significant effect of mother's education on the use of prenatal care and delivery assistance. In another study, Becker and colleagues found mother's education to be the most consistent and important determinant of the use of child and maternal health services.²⁵ Several other studies also found a strong positive impact of mother's education on the utilization of health care services.²⁶ It is argued that better educated women are more aware of health problems, know more about the availability of health care services, and use this information more effectively to maintain or achieve good health status.

Utilization of health services is a complex behavioral phenomenon. Information, education and communication on ANC must be intensified in order to reach the rural mothers. In a long run, women empowerment through informal education and income generating activities as well as involvement of husbands during information, education and communication are recommended.

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