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Health related factors associated with antenatal care among women

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Abstract
Introduction: One of the MDG5 tactical goals is to improve access to prenatal and postpartum programs that effectively reduce the morbidities associated with postpartum maternal health. Proper antenatal care is a very few of the pillars of Harmless Motherhood Initiatives, an international effort thrown by the World Health Organization (WHO) and other cooperating agencies in 1987 intended to lessen the quantity of deaths related to pregnancy and childbirth. Aim of the Study: the aim of this study is to identify the factors associated with antenatal care among women in rural area.
Material & Methods: This is a cross sectional study conducted in Rajshahi Medical College Hospital, Rajshahi, Bangladesh during the period from January 2018 to December 2018. A total number of 174 ever-married reproductive aged women with at least one child were selected for this study. In this study the method of direct interview was used for data collection. Attention was given to record factual and true statement made by the respondents. The fieldwork was commenced on from 1st November 2016 and was completed 10th February 2018.
Results: Age range of the study participants were from 16 to below 40 years, where almost half of the respondents (44.82%) were aged 20-24 years, 10.91% were aged <=19 years and only 8.04% are aged <40 years. The socio-demographic characteristics of the study participants shows, majority (60.92%) were aged between 16-19 years at the time of their marriage, and 39.65% of the total participants were aged between 18-20 years at their first delivery; 72.41% have one child; 82.76% of the total participants were from rural area and the rest 17.24% were from urban area. Of the total patient 87.94% have currently used contraceptive and 74.13% have previously used contraceptive; majority (33.9%) had been on oral pill, 32.18% were using condoms, and 25.31% had no adopted methods; no. of antenatal visits shows that, 82.7% had visited less than 4 times and the rest 17.3% had visited more than 4 times; majority (60.9%) selected hospital as the place of antenatal visits and only 1.18% selected NGO as the place of antenatal visits; 67.24% had normal delivery and most of the patients (93.11%) continued breastfeeding.
Conclusion: public health policies intended to reduce maternal morbidities and mortalities in Bangladesh should consist of strategies that will advance maternal health care service (MHCS).

Keywords: health related factors, antenatal care, pregnancy

1. Introduction

Antenatal care (ANC) has long been considered a critical component of the continuum of care for women during pregnancy, with the potential to contribute to the survival and thriving of women and newborns [1, 2]. This essential service allows women to be screened during their pregnancies for pre-existing conditions and potential complications, allows for initiation of timely and appropriate treatment, and provides a platform for women to receive counselling, which can support them to protect their health and that of their baby throughout the antenatal, birth and postnatal periods [3]. Moreover, ANC is becoming increasingly important as a service as the world undergoes an obstetric transition [4]. The care of antenatal mothers is highlighted as a significant component in motherly healthcare as per suitable care will lead to effective pregnancy outcome and healthy babies. One of the most significant roles of ANC is to offer health info and services that can significantly recover the health of women and their infants [5]. Moreover, ANC during pregnancy seems a helpful impact on the use of postnatal healthcare services [6]. All pregnant women are suggested to go for their first antenatal check-up in the first trimester for recognizing and dealing any medical complication also to screen them for any risk factors that might disturb the advancement and result of their pregnancy. Experiential evidence shows that four visits are sufficient for basic pregnancies and more are required only in cases of difficulties [7]; hereafter the World Health Organization currently acclaims at least four ANC visits in the course of pregnancy. Numerous studies have observed issues affecting ANC utilization [8, 12] but none has methodically summarized them in developing countries. Only one assessment

has inspected interventions, which increase use of ANC [13]. According to the Perinatal Care Manual recently edited by the Ministry of Health Malaysia, primigravida women are advised to go for a total of ten visits during their pregnancy and for multigravida women, the total recommended antenatal visit is seven sessions [14].

2. Objectives

a. General objective

- To identify the factors associated with antenatal care among women in rural area

b. Specific Objectives

- To assess the initiatives to increase access to antenatal care for ultra-poor population of Bangladesh
- To identify more about antenatal care services and present conditions in rural Bangladesh

3. Methodology and Materials

This is a cross sectional study conducted in Rajshahi Medical College Hospital, Rajshahi, Bangladesh during the period from January 2018 to December 2018. A total number of 174 ever-married reproductive aged women with at least one child were selected for this study. In this study the method of direct interview was used for data collection. Attention was given to record factual and true statement made by the respondents. Before going to analysis, data were cleaned and complied. Statistical analysis were performed by SPSS version 20.

Inclusion Criteria

- Ever-married and reproductive aged group.
- Age between 16-40 years

Exclusion Criteria

- Age not less than 16 years or above 40 years
- Not given consent
- Severely ill women

4. Results

A total number of 174 ever-married reproductive aged women with at least one child were selected for this study. Age range of the study participants were from 16 to below 40 years, where almost half of the respondents (44.82%) were aged 20-24 years, 10.91% were aged <=19 years and only 8.04% are aged <40 years (Figure I). Table I shows the socio-demographic characteristics of the study participants where we see, majority (60.92%) were aged between 16-19 years at the time of their marriage, and 39.65% of the total participants were aged between 18-20 years at their first delivery; 72.41% have one child, 19.54% have two children and 8.05% have three children; 82.76% of the total participants were from rural area and the rest 17.24% were from urban area; majority of them were educated up to secondary level and only 6.91% were higher educated. Education, occupation and monthly income of the respondents and respondent's husband are also shown in Table I. Distribution of Health-related Variables of the study participants shown in Table II describes that, majority (78.74%) of the participants had normal BMI; of the total patient 87.94% have currently used contraceptive and 74.13% have previously used contraceptive; majority (33.9%) had been on oral pill, 32.18% were using condoms, and 25.31% had no adopted methods; no. of antenatal visits shows that, 82.7% had visited less than 4 times and the rest 17.3% had visited more than 4 times; majority (60.9%) selected hospital as the place of antenatal visits and only 1.18% selected NGO as the place of antenatal visits; 67.24% had normal delivery and most of the patients (93.11%) continued breastfeeding. Table III shows the patterns of antenatal care visits according to the health-related variables. From the distribution of Iron and Folic Acid intake of the study participants (Table IV) we see most of the participants (86.78%) consumed Iron or Folic Acid tables and majority (64.94%) of them consumed 100-149 Iron or Folic Acid.

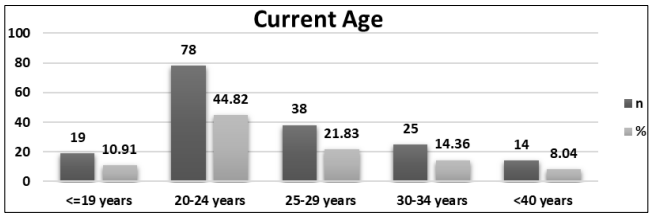

Fig 1: Age distribution of the study participants. (n=174)

Table 1: Distribution of the socio-demographic characteristics of the study participants. (n=174)

Socio-demographic variable	n	%
Age at Marriage		
<16 years	12	6.89
16-19 years	106	60.92
>19 years	56	32.19
Age at First Delivery		
<18years	45	25.87
18-20 years	69	39.65
> 20 years	60	34.48
CEB		
One child	126	72.41
Two child	34	19.54
Three child	14	8.05
Place of previous delivery		
Hospital	90	51.72
Home	69	39.65
PHC	15	8.63
Place of Residence		

Urban	30	17.24
Rural	144	82.76
Educational Status of Respondents		
Illiterate	25	14.36
Primary educated	35	20.11
Secondary educated	102	58.62
Higher educated	12	6.91
Educational Status of Respondent's Husband		
Illiterate	16	9.19
Primary educated	21	12.06
Secondary educated	114	65.52
Higher educated	23	13.23
Occupation of Respondent's Husband		
Job	6	3.44
Business	48	27.58
Farmer	97	55.74
Day Labor	23	13.28
Monthly Income of Family		
≤ 6000 taka	71	40.80
6000-8000 taka	73	41.95
> 8000 taka	30	17.25

Table 2: Distribution of Health-related Variables of the study participants. (n=174)

Health related variables	**n**	**%**
Body Mass Index (BMI)		
Underweight	17	9.77
Normal	137	78.74
Overweight	20	11.49
Currently Used Contraceptive		
Yes	21	12.06
No	153	87.94
Previously Used Contraceptive		
Yes	129	74.13
No	45	25.87
Adopted Method		
Oral pill	59	33.9
Condom	56	32.18
IUD	2	1.14
Injection	13	7.47
No adopted method	44	25.31
No. of Antenatal Visits		
<4 visits	144	82.7
≥4visits	30	17.3
Place of Antenatal visits		
Hospital	106	60.9
Clinic	57	32.75
Community health center	9	5.17
NGO	2	1.18
Nature of Delivery		
Non-caesarean	117	67.24
Caesarean	57	32.76
Breastfeeding		
No	12	6.89
Yes	162	93.11
Total	174	100

Table 3: Patterns of Antenatal Care Visits According to the Health-Related Variables. (n=174)

Characteristics	**No of antenatal visits**			**P value**
	< 4 visits	≥4 visits	Total	
BMI				
Underweight	15(88.23%)	2(11.77%)	17(100.0%)	

Normal	122(89.05%)	15(10.95%)	137(100.0%)	
Overweight	12(60%)	08(40%)	20(100.0%)	
Place of Residence				
Rural	119(82.63%)	25(17.37%)	144(100.0%)	
Urban	23(76.66%)	7(23.34%)	30(100.0%)	

Table 4: Distribution of Iron and Folic Acid intake of the study participants. (n=174)

Variables	n	%
Status of Iron and Folic Acid intake		
Yes	151	86.78
No	23	13.22
Total	174	100
Number of Iron and Folic Acid intake		
<50	17	09.77
50-99	24	13.80
100-149	113	64.94
150-200	14	08.04
>200	6	3.45
Total	174	100

5. Discussion

A total number of 174 ever-married reproductive aged women with at least one child were selected for this study. Risk of complications in second pregnancy is generally much inferior if the first pregnancy and birth was uncomplicated than if it was not.[15] Many women have earlier reported less ANC visits than nulliparous perhaps because they had experienced previous pregnancies [16, 17]. There was no statistical evidence for late initial visit attendance of ANC among multiparous women as found in previous studies in Vietnam [17, 18]. In this study, of the total patient 87.94% have currently used contraceptive and 74.13% have previously used contraceptive; majority (33.9%) had been on oral pill, 32.18% were using condoms, and 25.31% had no adopted methods; no. of antenatal visits shows that, 82.7% had visited less than 4 times and the rest 17.3% had visited more than 4 times; majority (60.9%) selected hospital as the place of antenatal visits and only 1.18% selected NGO as the place of antenatal visits; 67.24% had normal delivery and most of the patients (93.11%) continued breastfeeding; majority of respondents live in rural area which is 82.76%. The educational background of the respondents is concerned that respondents have the secondary level of education (58.62%) and respondent's husbands have secondary level of education (65.52%). In our study we have seen a large number of women (39.65%) gave birth to their previous child at home. Another study also described that, 77% of women from the Tigray region thought that the motive of not using health facility delivery was that they supposed it as not necessary [19]. Similar studies have shown the connection between childbirth and the backgrounds and duties of the community, the inspiration of religion for choosing to give birth at home [20, 24]. A previous study from Tigray region exposed a major impact of religion where women trusting on God's will during delivery decided to stay at home. In the same way, elderly relatives at the household level strongly influenced women in giving birth at home [24]. In our study majority (78.74%) of the participants had normal BMI and overweight and underweight patients were less likely to attain more than 4 antenatal visits. The risks of no. of antenatal visit for underweight are 0.850 times inferior than normal weight and the risks of no. of antenatal visit for overweight are 0.746 times lower than normal weight. The risks of postnatal care for >20 years are 0.495 times lower than ≤20 years. Again, body mass index has positively significant effects on postnatal care. The risks of postnatal care for underweight are 0.872 times lower than normal weight [25]. Pregnant women who have had no iron or folic acid intake on the current pregnancy were in about two times higher risk of developing anemia as related to those who have had iron or folic acid intake. This finding is reliable with the results from Gode town (Eastern Ethiopia) and Vietnam [26, 27], which indicated that lack of iron supplementation was among the most significant risk factors for developing anemia during pregnancy. This is probable due to the circumstance that the necessity for iron increases for pregnant women as compared to nonpregnant women. Therefore, supplementation of iron during pregnancy is crucial to fulfil this need.

6. Limitations of the study

This cross-sectional study was conducted in a single community. It was also based on respondent's personal report on satisfaction. So, the results might not reflect the actual scenarios of the whole community.

7. Conclusion and recommendations

Increasing maternal education in all regions especially rural areas. Health campaigns against early marriage and awareness program to inform teenage and young women about the values of early pregnancy may play vital role. Income generating work chances should be increased for women so that they can be financially independent to seek better health care services. Initiatives to increase access to antenatal for ultra-poor population. Availability of health care facilities and skilled health professionals need to be ensured in the rural areas of Bangladesh so that women do not seek care from non-qualified unskilled doctors, pharmacy or traditional healers.

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