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DETERMINANTS OF ANTENATAL AND POST-NATAL CARE AMONG WOMEN IN CHUADANGA DISTRICT, BANGLADESH

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ABSTRACT

Background: Antenatal and postnatal care services are the most effective interventions to improve maternal health and prevent maternal and infant deaths. The Government of Bangladesh (GOB) has undertaken some initiatives to improve maternal health services such as implementation of community health clinic, campaigning to increase awareness, demand side financing etc. **Materials & Methods:** It was a cross sectional study conducted in chuadanga district. A total of 300 participants took part in the study form June to December 2018. Data were collected by face to face interview using semi structured questionnaire. **Results:** More than half of the respondents (8.3% were aged 20-25 years. About 83% of women did not have at least four antenatal visits during their last birth, only 5 had at least four antenatal visits during their last birth. Here, 34% of respondents gave birth in their home; while 68.3% respondents had their last delivery with the assistants of a trained person Most of the respondents 82.0% didn't receiving postnatal care during their last birth. **Conclusion:** Assessment of overall health facilities of a society as well as a country like Bangladesh, maternal morbidity and maternal health seeking behaviors' are powerful indicator which influenced by various socio-demographic factors.

KEYWORDS: *Antenatal care, postnatal care, morbidity, mortality, safe motherhood.*

I. INTRODUCTION

Antenatal and postnatal care services are vital determinants to improve maternal health and protect maternal and infant lives. In the continuum of maternal health care, antenatal care, institutional/skilled attendance at delivery and postnatal care are important milestones required to achieve optimum maternal and child health. These elements of care are expected to be provided as a continuum of care in order to impact optimum benefit and the provision of these elements of care in a comprehensive and continuum pattern of care during pregnancy, child birth and postpartum period has been argued to reduce maternal and neonatal death.[1] Antenatal care affords the medical personnel the opportunity to detect and treat symptomless ailments such high blood pressure and pregnancy-induced diabetes and facilitates informed decision-making by the pregnant woman such as seeking skilled attendance at delivery and delivery in health care facility. All interventions received by the pregnant woman during ANC have the potential to improve the survival chance of herself and her newborn.[2-5] Benefit of ANC is that women who utilized ANC are more likely to utilize institutional/skilled delivery.[6] Institutional delivery/skilled attendance at delivery allow provision of intervention to detect risk around labour and childbirth during which interventions can maximally be provided by skilled medical personnel at health facilities.[7] The utilization of ANC and institutional delivery/skilled attendance at delivery alone is not enough to improve maternal and child health and that postnatal care has to be provided to sustain the reduction in neonatal mortality.[8,9]

Bangladesh has taken on health, nutrition, and population sector programs with distinct national strategies for more than one decade in order to reduce maternal mortality, with particular focus on early detection and proper referral of complications, and advancement of the quality of care. Despite of these measures, significantly more women from more affluent families delivered at health facilities, while women from financially inferior households often delivered with untrained conventional birth attendants.[8] In order to evaluate the development toward the reduction of MMR which mostly rely on universal access to reproductive health, it is essential to monitor inequalities in the utilization of maternal care services including delivery and postnatal care. This paper attempts to identify the related factors and their magnitude of effects on the unequal utilization of

perinatal care which involves delivery assistance services and postnatal care services.[10] The utilization of maternal health care is one of the important factors to reduce the incidence of such maternal morbidity and maternal mortality. The Government of Bangladesh (GOB) has undertaken some initiatives to improve maternal health services such as implementation of community health clinic, campaigning to increase awareness, demand side financing etc.

II. MATERIALS & METHODS

Study design: A descriptive type of cross sectional study was conducted.

Study Place: The study was conducted in Chuadanga district in Bangladesh.

Study period: The study period was from June to December, 2018.

Study population: Mothers came to in Chuadanga district Hospital aged 15-49 years & who have at least one childbearing experienced.

Sampling method & Sample: purposive sampling technique was used. Total sample size-300.

Eligibility criteria: Aged 15-49 years & who have at least one childbearing experienced.

Research approach: Data were collected by face to face interview with the help of semi-structured questionnaire.

Data processing & analysis: All the data were checked and edited after collection. Data were then entered into computer, with the help of SPSS for Windows (IBM SPSS Statistics for Windows, version 25). An analysis plan was developed keeping in view with the objectives of the study. Statistical analyses were be done by using appropriate statistical tool. Statistical significance was assessed at the 0.05 level for all analyses.

Data quality management: Data quality was strictly maintained in every stages of data collection, interpretation, analysis. Tools and instruments were checked every day. At the end of each day of data collection, each questionnaire was checked to see whether it was filled up completely and consistently.

Ethical issues: The study was done through collection of data using questionnaire and neither any intervention nor any invasive procedures was be undertaken. However, prior to initiation of the study ethical clearance was taken from appropriate Ethical Committee.

III. RESULTS

This cross-sectional comparative study was done to find out Determinants of Antenatal and Post-natal Care among Women in Chuadanga District, Bangladesh. A total of 300 were enrolled in the study. The findings derived from the data analysis are presented in this section.

Table-1 shows the socio-demographic distribution of the respondents. Here, more than half of the respondents (8.3% were aged 20-25 years. Majority of the women 59.3% got married between ages 16 to 18 years and 34.7% gave first birth during 18-20 years of age and 61.0% have at one child. Most of the respondents 96.0% were from rural areas and 61.0% respondents were secondary level education. Similarly, most of the respondent's husbands 58.7% were secondary level education. About half of the respondent's husbands 50.3% were farmer and 33.0% were engaged in business. The results indicate that 40.7% of the respondents' family income below TK. 8000 monthly. About 64% respondents had access to mass media and 36.3% didn't have frequent access to mass media.

Table 1: Distribution of the respondents by socio-demographic information (n=300).

Socio-demographic variable	Frequency	Percentage (%)
Age (in year)		
< 20 year	73	24.3
20-25 year	175	58.3
> 25 year	52	17.3
Age at marriage		
< 16 years	54	18.0
16 -18 years	178	59.3
18 years	68	22.7
Age at first birth		
< 18 years	104	34.7
18-20 years	112	37.3
> 20 years	84	24.0
Number of child		
One child	183	61.0
Two child	93	31.0
Three child	24	8.0
Place of residence		
Urban	12	4.0
Rural	288	96.0
Educational status of respondent		
No education	16	5.3

Primary education	87	29.0
Secondary education	183	61.0
Higher education	14	4.7
Educational status of respondent husband		
No education	33	11.0
Primary education	41	13.7
Secondary education	176	58.7
Higher education	50	16.7
Occupation of respondent husband		
Job	33	11.0
Business	76	33.0
Farmer	149	50.3
Day Labor	42	14.0
Monthly income of family		
≤ 8000 taka	122	40.7
8000-10000 taka	131	43.7
> 10000 taka	45	15.0
Exposure to mass media		
No	109	36.3
Yes	191	63.7
Total	300	100.0

Table 2 shows the health related conditions of the respondents. Majority of the respondents 87.7% did not use any family planning method during the time of data collection. However, about 74.0% of the respondents used contraceptives before. One-third of the women 34.0% used oral pill, another one-third 32.0% used condom, 0.7% used IUD, and 7.3% of women used injection. About 83% of women did not have at least four antenatal visits during their last birth, only 5 had at least four antenatal visits during their last birth. More than one-third of women 37.3% had caesarean delivery during their last birth. About 34% of respondents gave birth in their home, while rest 62.3% of respondents had their last delivery in a hospital or a clinic. About 68.3% of respondents had their last delivery with the assistants of a trained person (i.e. medical doctor, nurse, family welfare assistant, and urban health officer) and rest 31.7% of respondents had delivery with the help of unskilled person (i.e. relatives, dais and village doctor). Most of the respondents 82.0% didn't receiving postnatal care during their last birth and 93.0% respondents ensure breastfeeding to their babies.

Table 2: Distribution of the respondents by Health related conditions (n=300)

Health related variable	Frequency	Percentage (%)
Body mass index (BMI)		
Underweight	30	10.0
Normal	238	79.3
Overweight	32	10.3
Currently used contraceptive		
Yes	37	12.3
No	363	87.7
Previously used contraceptive		
Yes	222	74.0
No	78	26.0
Adopted method		
Oral pill	102	34.0
Condom	96	32.0
IUD	2	.07
Injection	22	7.3
No adopted method	78	26.0
Number of Antenatal visit		
< 4 visits	248	82.7
≥ 4 visits	52	17.3
Place of antenatal Visits		
Hospital	183	61.0
Clinic	98	32.7

Community health center	15	5.0
NGO	4	1.3
Nature of delivery		
Non-caesarean	202	67.3
Caesarean	98	32.7
Place of delivery		
Home	113	37.7
Hospital/clinic	187	62.3
Delivery Assistant		
Trained person	205	68.3
Untrained person	95	31.7
Postnatal care		
No	246	82.0
Yes	54	18.0
Breastfeeding		
No	21	7.0
Yes	279	93.0
Total	300	100.0

Table 3 shows the distribution of the respondents according to association between Socio-demographic characteristics and Health Related Variables. The respondent's educational status has a highly significant association (p = 0.000) with the number of antenatal visit. So, we see number of antenatal visit is higher for higher educated persons and low for illiterate persons. The husband occupation (p = 0.000) is highly significant association between number of antenatal visit. There is highly significant association between Monthly income of family, types of family and number of antenatal visit (p = 0.000).

Table 3: Distribution of the respondents According to association between Socio-demographic characteristics and Number of antenatal visit (n=300).

Characteristics	Number of antenatal visit			P-value
	< 4 visits	≥ visits	Total	
Place of residence				
Rural	239(83.0%)	49(17.0%)	288(100.0%)	p= 0.040
Urban	9(75.0%)	3(25.0%)	12(100.0%)	
Education of respondent				
No education	15(93.8%)	1(6.2%)	16(100.0%)	p= 0.000
Primary	77(88.5%)	10(11.5%)	87(100.0%)	
Secondary	150(82.9%)	33(18.0%)	183(100.0%)	
Higher	6(42.9%)	8(57.1%)	14(100.0%)	
Education of respondent's husband				
No education	26(78.8%)	7(21.2%)	33(100.0%)	p= 0.017
Primary	34(82.9%)	7(11.5%)	41(100.0%)	
Secondary	152(86.4%).	24(18.0%)	176(100.0%)	
Higher	36(72.0%)	14(57.1%)	50(100.0%)	
Occupation of respondent's husband				
Job	17(51.5%)	16(48.5%)	33(100.0%)	p= 0.000
Business	66(86.8%)	10(13.2%)	76(100.0%)	
Farmer	134(89.9%).	15(10.1%)	149(100.0%)	
Day Labor	31(93.4%)	11(26.2%)	42(100.0%)	
Monthly income				
< 8000 taka	102(83.56%)	20(16.4%)	122(100.0%)	p=0 .000
8000-10000 taka	115(91.3%)	11(8.7%)	126(100.0%)	
> 10000 taka	131(59.6%).	21(40.6%)	52(100.0%)	
Types of family				
Nuclear	225(86.55%)	35(19.5%)	260(100.0%)	p=0 .000
Joint	23(57.5%)	17(42.5%)	40(100.0%)	
Exposure to mass media				
Yes	225(86.55%)	35(19.5%)	260(100.0%)	p= 0.043
No	23(57.5%)	17(42.5%)	40(100.0%)	

Religion				
Muslim	66(86.8%)	10(13.2%)	76(100.0%)	p= 0.043
Hindu	134(89.9%).	15(10.1%)	149(100.0%)	
Current age				
≤ 20 years	102(83.56%)	20(16.4%)	122(100.0%)	p= 0.048
20-25 years	115(91.3%)	11(8.7%)	126(100.0%)	
> 25 years	131(59.6%).	21(40.6%)	52(100.0%)	
Age at first marriage				
≤ 16 years	66(86.8%)	10(13.2%)	76(100.0%)	p= 0.045
16-18 years	134(89.9%).	15(10.1%)	149(100.0%)	
> 18 years	31(93.4%)	11(26.2%)	42(100.0%)	
Age at first birth				
≤ 18 years	102(83.56%)	20(16.4%)	122(100.0%)	p= 0.048
18-20 years	115(91.3%)	11(8.7%)	126(100.0%)	
> 20 years	131(59.6%).	21(40.6%)	52(100.0%)	
Number of child				
One child	102(83.56%)	20(16.4%)	122(100.0%)	p= 0.030
Two child	115(91.3%)	11(8.7%)	126(100.0%)	
Three child	131(59.6%).	21(40.6%)	52(100.0%)	
BMI				
Underweight	66(86.8%)	10(13.2%)	76(100.0%)	p= 0.020
Normal	134(89.9%).	15(10.1%)	149(100.0%)	
Overweight	31(93.4%)	11(26.2%)	42(100.0%)	
Total	248(82.7%)	52(17.3%)	300(100.0%)	

IV. DISCUSSION: This study is an attempt to investigate the Determinants of Antenatal and Post-natal Care among Women in Chuadanga District, Bangladesh. The data were collected from Chuadanga district through purposive sampling. A total of 300 data have collected for this study through face to face interview.

In this study, the majority of respondents are live in rural area which is 96.0%. The educational background of the respondents are consumed that respondents have the secondary level of education (61.0 %) and respondent's husbands have secondary level of education (58.7 %). So, it can be mentioned that a big amount of respondents have at least the secondary level of education under their belt. We see that all respondents of our study are housewives and maximum respondent's husband belongs to farmer. Most of respondents' (42.0 %) monthly family income is 6009-8000 taka and 97.3% respondents are Muslim. The majority (58.3%) of respondents' is 20-25 years of age and 59.3% respondent's age at first marriage belong to age group 16-18 years. Respondents have previously used contraceptive (74.0%) among them 34.0% respondent adopted oral pill. Majority of respondent antenatal visits <4 time, which is 82.7% and also 61.0% respondents having antenatal visits in hospital. Large number (82.7%) of respondents'antenatal visit <4 times and also 61.0% respondent antenatal! visit in hospital. For the case of caesarean and non-caesarean delivery, we — that the last child birth of non-caesarian is 67.3% and caesarian is only 32.7%. Among the total respondent for last child delivery is taking help in hospital/clinic 62.3% and 37.7% in home. In case of postnatal care 82.0% respondent doesn't received postnatal care and only 18.0% respondent received postnatal care.

Place of residence is one of the most important Socio-economic determinants of antenatal care, and postnatal care [11] found that place of residence were significantly (p = 0.0001) associated with antenatal care and postnatal care in Nigeria From results, we see that 25.0% urban, and 17.0% rural persons have >4 times antenatal is, and 50.0% urban, 16.7% rural persons have postnatal care.

Occupation of respondent's husband is important socio-economic determinant of antenatal care, delivery care and postnatal care. The study show that, 48.5% Job, 13.2% Business, 10.1% farmer, and 26.2% day labor have >4 times antenatal visit, and 36.4% Job, 14.5% Business, 14.8% farmer and 21 4% day labor persons have postnatal care. It is found that, the education of respondent would increase with the respondent's number of antenatal visit also increase. A specialized Emergency Obstetrics Care should be developed within the Upazilla Health Complexes as a secondary referral Centre so high-risk mothers can receive better care when they reach the facility during an obstetric emergency.

V. CONCLUSION AND RECOMMENDATION: This study suggests that distance, infrastructure and socioeconomic status are important determinants of maternal healthcare-seeking behavior. Healthcare delivery systems and appropriate education programs should be developed at the village level to improve the health of mothers and children. Improvement of maternal health care services especially antenatal and postnatal care are regarded as an important component for

achieving targets of SDGs by the year 2030. Assessment of overall health facilities of a society as well as a country like Bangladesh, maternal morbidity and maternal health seeking behaviors' are powerful indicator which influenced by various socio-demographic factors.

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Conflict of interest: None to declare.

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