

# Mothers Awareness on Antenatal Care in Bangladesh

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## Abstract

The antenatal care is an extremely important health care service during pregnancy to reduce maternal and neonatal morbidity and mortality. This descriptive cross sectional study aimed to examine the extent of impact of mother's awareness gained through antenatal care on mother and newborn health. The complete set of data from 241 rural and 201 urban mothers by systematic random sampling was used in the data analysis. Data were collected using: 1) demographic data questionnaire, 2) awareness related questionnaire and 3) impact related questionnaire. Content validity was checked by six experts and back translation was done. The Cronbach's alpha (Reliability test) coefficients of the second and third questionnaire were 0.738. Ethical clearance was obtained from appropriate authority. Descriptive and inferential statistics were used for analysis according to the objectives of the study by using SPSS program version 22.0. The findings showed that impact of mothers awareness regarding ANC on mothers and newborn health, most (97.5%) rural and (99%) urban mothers were received ANC and greater than or equal to 4 visit were received more than half (55.2%) rural and (58.7%) urban mothers during pregnancy, most (94.2%) rural and (92.0%) urban mothers had delivered in the hospital, 95.0% rural & 92.5% urban mothers was delivered by the doctors and nurses, 76.8% rural & 77.1% urban mothers had no problem during delivery, 79.3% rural & 80.6% urban mothers condition was good during delivery and 83.8% rural & 88.1% urban mothers condition was good after delivery. Impact of ANC on newborn health, almost 84% rural & 86% urban baby's birth weight were 2.5kg to 3 kg which is within normal level, most (86.7%) rural & (89.5%) urban babies condition was good during birth and statistically highly significant ( $p=.001^{***}$ ), most (89.7%) rural & 92.6% urban babies condition was good after birth which is statistically highly significant ( $p=.001^{***}$ ), the maximum (87.5%) rural & (82.1%) urban babies first feeding was colostrums and highly co-association ( $p=.000^{***}$ ) between both mothers. But initiation of colostrums within one hour after birth only (8.5%) rural & (8.9%) urban mothers was given. Most (49.3%) rural and (55.2%) urban mothers first colostrums was given to their baby within 2 hours after birth. Pre-lacteal feed (11.6%) rural & (17.9%) urban mothers was given to their babies as first feed. Most (84.4%) rural and (91.1%) urban mothers exclusively breastfed to their baby which is statistically highly significant ( $p=.000^{***}$ ,  $p=.000^{***}$  &  $p=.000^{***}$ ). Regarding the level of mothers awareness and impact, it was observed that mothers who had high level awareness, they had also high level impact and statistically moderate significant ( $p=.033^{**}$ ) for the all mothers and mild significant ( $p=.077^{*}$ ) for the urban mothers but no significant ( $p=1.779$ ) for the rural mothers was found. Regarding the relationship between impact and awareness, chi-square test was found highly significant ( $p=.004^{***}$ ) in rural mothers and ( $p=.002^{***}$ ) in urban mothers. On the other hand, by the one sample Test, it was found that impact of mothers awareness on antenatal care was found significantly high correlated ( $p=.000^{***}$ ) to the rural mothers and also significantly high correlated ( $p=.000^{***}$ ) to the urban mothers. The overall impact on mother and newborn health by the mothers awareness score on antenatal care, the result showed that good impact was found on newborn health regarding birth weight ( $p=.000^{***}$ ), babies condition during child birth ( $p=.002^{***}$ ), babies condition after child birth ( $p=.007^{***}$ ) but no significant on mother health during delivery ( $p=.247$ ) and mothers condition after delivery ( $p=.475$ ). The results reported here highlight the relationship between ANC awareness and good impact or outcomes in the rural and urban mothers. Individually also highly significant relationship was found between the impact and awareness. Though, there was relationship between awareness and impact. But only good impact was found on newborn health. Health education can improve the mothers' awareness regarding antenatal care which will help to good impact on mother and newborn health. However, the findings of the study can be used in further experimental study to represent the whole population.

**Key words:** Awareness, Impact, Mothers and Antenatal Care

## Introduction

The magnitude of women's reproductive health problems is a serious matter of concern. Among the reproductive health parameters Antenatal care (ANC) and safe delivery have important positions as these are directly related with maternal morbidity and mortality. Maternal and infant morbidity and mortality is a serious public health problem globally (The State of the World's Midwifery: 2011, Datta, D.C. 2014, WHO). Both maternal and child health are interdependent and substantially contributing to high burden of mortality worldwide. Every year, 2,89,000 women die due to complications in pregnancy and childbirth, and 6.6 million children below 5 years of age die of complications in the newborn period and of common childhood diseases (MDGs- 2015, WHO, 2014). 99% of these deaths occur in the developing countries. Not only that estimated 8 million more suffer serious illness and lifelong disabilities (WHO, UNICEF, UNFPA and the World Bank, 1990-2008, and WHO, 2010). Every year 2 million newborns die within first 24 hours

of life. Each day 12,000 babies die among the 35,000 babies within their first month of life, 2.6 million stillbirths, of which approximately 45% occur during labour and birth. More over millions of newborns suffer birth trauma that impairs their development and future productivity. These deaths occur late in pregnancy, at birth, or soon after delivery due to poor maternal and newborn care or inadequate management of pregnancy related complications.

Bangladesh is one of the developing countries with in the world. The Maternal and infant morbidity and mortality are still high (Bangladesh progress report, 2007). Maternal Mortality Ratio (MMR) - 194/100000 live birth (BDHS, 2011), Neonatal Mortality Ratio (NMR)- 28/1000 (BDHS, 2014) live births, Infant Mortality Ratio (IMR)- 38/1000 (BDHS, 2014) live births and Under 5 mortality Rate (U5MR)-46/1000 (BDHS, 2014). More over every year 600,000 women suffer from maternal complications and 600,000 under-5 children suffer from various diseases. These deaths and complications have to occur especially during child birth, soon after delivery and within 6 weeks after birth due to lack of proper antenatal care and inadequate management of postnatal care (BD Progress Report, 2013, HPNSDP, 2012, Countdown, 2015, World's Midwifery, 2012). In comparison to develop world which are remain high like in Azerbaijan country: MMR-26/100000 live birth, IMR-31/1000 live birth, NMR-15/1000 live birth, U5MR-35/1000 live birth (Countdown, 2015). It is well recognized that good antenatal care improves maternal, perinatal and neonatal outcomes. That's way the Health Population & Nutrition Section Development Program has been initiated by the Ministry of Health and Family Welfare (MOHFW), Government of Bangladesh (GOB) for a period of five years from July 2011 to June 2016. Antenatal care (ANC) is one of the program to achieve the Millennium Development Goals 4 & 5. Antenatal care have to take complete physical check-up at regular intervals and early detection of deviation from the normal and their proper intervention or timely therapy.

### **Objectives of the Study**

The objectives of the study are as follows:

1. To find out the awareness of rural and urban mothers regarding antenatal care;
2. To identify the impact of awareness of rural and urban mothers regarding ANC;

### **Methodology of the Study**

**Study design:** The design of the study was cross sectional study.

**Study area:** The study was conducted in Department of Obstetrics and Gynecology at Dhaka Medical College Hospital in Bangladesh.

**Study Period:** The study was conducted from July 2018 to December 2020.

**Sampling method:** Random sampling method was used for the study.

**Sample Size:** Total 400 respondents were selected for the study. Data were collected from the patients.

**Sources of Data:** Data were collected from primary and secondary sources.

**Sources of Primary Data:** Primary Data were collected from the respondents of the study area.

**Sources of Secondary Data:** Secondary Data were collected from Books, Research Report, Journal, Thesis, Internet etc.

**Tools for Data Collection:** Questionnaire was used for data collection.

**Method of Data Collection:** Data were collected by face to face interview with the respondents.

**Inclusion Criteria:** Pregnant Patients admitted in Gynecology words and patients who came Gynaecology OPD at Dhaka Medical College Hospital.

**Exclusion Criteria:** Other patients except Pregnant. Other gynecological complexities except nutritional problems.

**Ethical Consideration:** Permission for ethical consideration was taken from the Hospital Ethical Committee of Dhaka Medical College Hospital. All the patients were briefly understood about the purpose of the study and informed written consent was taken.

## Results and Discussion

**Table 1: Distribution by of newborn heir age:**

Age of newborn	Rural (N=241)		Urban (N=201)	
	Frequency	%	Frequency	%
2 days	71	29.5	72	35.8
3 days	100	41.5	77	38.3
4 days	37	15.4	27	13.4
5 days	9	3.7	5	2.5
6 days	3	1.2	4	2.0
>6 days	13	5.4	5	2.5
Stillborn	8	3.3	9	4.5
Death	-		2	1.0

From the result it was found that 3 days aged babies were maximum number and percent in case rural and urban areas.

**Table 2: Gestational age of mothers**

Gestational age of mother	Rural: N= 241		Urban: N=201	
	Frequency	%	Frequency	%
Term	204	84.6	154	76.6
Preterm	35	14.5	45	22.4
Post term	2	.8	2	1.0

From the result it was found that in case of rural areas term respondents were more than urban areas, in case of preterm urban area is more than rural areas.

**Table 3: Condition during pregnancy of Mother**

Condition during pregnancy	Rural: N= 241		Urban: N=201	
	Frequency	%	Frequency	%
No complication	235	97.5	197	98.0
Complication	6	2.5	4	2.0

From the result it was found that in case of rural areas 97.5% respondents had no complications but in case of urban areas 98% respondents hand no complications. So we can say complications during pregnancy are more in rural areas than urban areas.

**Table 4: Sources of knowing antenatal care**

From where knew about antenatal care	Rural: N= 241		Urban: N=201	
	Frequency	%	Frequency	%
Relatives	104	43.2	80	39.8
Neighbor and relatives	60	24.9	55	27.4
Relative and media	22	9.1	23	11.4
Media	14	5.8	18	9.0
Neighbor	41	17.0	25	12.4

From the result it was found that in case of rural and urban areas most of the mothers are knowing about antenatal care from their relatives followed by neighbor and relatives.

**Table 5: Importance of antenatal care**

Importance of antenatal care	Rural: N= 241		Urban: N=201	
	Frequency	%	Frequency	%
Mother and child benefit	196	81.3	189	74.1
Child benefit	32	13.3	45	22.4
Mother benefit	3	1.2	1	0.5
Child and family benefit	5	2.1	4	2.0
Don't know	5	2.1	2	1.0

From the result it was found that most of the mothers thought that antenatal care is important for both mother and child benefit.

**Table 6: Components of antenatal care**

Components of antenatal care	Rural: N= 241		Urban: N=201	
	Frequency	%	Frequency	%
Advise and counseling	90	37.3	78	38.8
Full physical care	99	41.1	70	34.8
Investigation	45	18.7	51	25.4
Don't know	7	2.9	2	1.0

From the result it was found that most of the mothers thought that antenatal care is getting advice and counseling followed by full physical care and investigation.

**Table 7: Advice giving person for antenatal care**

Advice giving person for antenatal care	Rural: N= 241		Urban: N=201	
	Frequency	%	Frequency	%
Doctor	73	30.3	74	36.8
Nurse	17	7.1	15	7.5
Relative	62	25.7	53	26.4
FWV	57	23.7	36	17.9
Doctor and Nurse	10	4.1	14	7.0
Doctor and FWV	16	6.6	7	3.5
Nobody	6	2.5	2	1.0

From the result it was found that most of the mothers are getting antenatal care related advices from doctors in rural and urban areas.

**Table 8: Number of receiving antenatal care**

Number of receiving antenatal care	Rural: N= 241		Urban: N=201	
	Frequency	%	Frequency	%
One visit	11	4.6	17	8.5
Two visits	56	23.2	40	19.9
Three visits	35	14.5	24	11.9
Four visits	124	51.5	96	47.8
More than fourth visits	9	3.7	22	10.9
No visit	6	2.5	2	1.03.5

From the result it was found that mothers of urban areas are going more to Hospital for receiving antenatal care than the mothers of rural areas.

## Conclusion

Ensuring adequate coverage of ANC and maintaining adherence to the recommended ANC guidelines has the potential to save the lives of women and newborns of Bangladesh and contribute towards achieving the ambitious targets encompassed by the SDGs. The study demonstrates that coverage of ANC remains poor in rural areas in Bangladesh, both in terms of timing of initiation of ANC and in the number of contacts.

Moreover, glaring gaps remain in the content of the care received which women access these services. This descriptive cross sectional study designed to examine the extent to which mother's awareness of antenatal care influence the impact on mother and newborn health. This study was conducted at labor ward and postnatal ward in Dhaka Medical College Hospital and Sir Salimulla Medical College Mitford Hospital Dhaka from January 2014 to December 2015. Four hundred forty two mothers were used in the statistical analysis. Among them two hundred fifty six rural mothers and one hundred eighty six urban mothers. Mothers were asked to respond to the instruments that included the demographic Data, the awareness Questionnaire, the Impact Questionnaire. The instruments were validated by seven experts. All Instruments were translated into Bengali language through the back translation procedure. A pilot study was done with 30 postpartum mothers. The Cronbach's alpha reliabilities of questionnaire were .738. Descriptive statistics were used to analyze the demographic data, awareness and impact data. Pearson's product correlation was used to analyze the relationships among variables.

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