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Assessment of the Level of Awareness among Pregnant Women Regarding Antenatal Care Services at the Selected Upazila Hospital in Bangladesh

Dr. Deb Dulal Dey Parag[1*], Dr. Ummul Khair Alam[2], Dr. Irfan Nowroze Noor[3], Dr. Nishat Barman[4], Md. Sazzad Hossain[5], Dr. Antara Paul Alo[6], Dr. Susmita Podder Irani[7], Dr. Noshin Nahid Tammi[8]

[1]Surveillance Medical Officer (SMO), Department of Epidemiology, National Heart Foundation of Bangladesh, Dhaka, Bangladesh
[2]Assistant Professor & Head, Department of Maternal and Child Health, National Institute of Preventive and Social Medicine (NIPSOM)
[3]Assistant Professor, Department of Epidemiology, National Institute of Preventive and Social Medicine (NIPSOM)
[4]Registrar, Department of Paediatrics, Park View Medical College, Sylhet
[5]Divisional Program Officer (DPO), Department of Epidemiology, National Heart Foundation of Bangladesh, Dhaka, Bangladesh
[6]Medical officer, Department of Human Resource & Compliance, Tasniah Fabrics Ltd, Bangladesh
[7]Study Physician, Department of Child Development. Projahnmo Research Foundation, Dhaka, Bangladesh
[8]Technical Officer, Department of Health Service, CARE Bangladesh

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***Corresponding author:** Dr. Deb Dulal Dey Parag
Surveillance Medical Officer (SMO), Department of Epidemiology, National Heart Foundation of Bangladesh, Dhaka, Bangladesh

Abstract **Original Research Article**

***Background*:** Antenatal care (ANC) is a critical component of maternal and child health care, focusing on the medical and psychological well-being of pregnant women from conception to the onset of labor. Therefore, awareness among pregnant women regarding antenatal care services is crucial. ***Aim of the study*:** The aim of this study was to assess the level of awareness among pregnant women regarding Antenatal Care Services. ***Methods*:** A descriptive cross-sectional study was carried out at 3 upazillas of Kishorganj district to assess the level of satisfaction of pregnant women regarding antenatal care at selected upazilla health complex during covid-19 pandemic. A total of 163 pregnant women were interviewed from 3 upazilla health complex, Kishorganj were included in this study. ***Result*:** Most pregnant women visiting the upazilla health complex were aged 18-23 (54.6%), with a mean age of 23.38 years (SD ±3.659). Information about the complex's services was primarily received from healthcare personnel (70.6%). The majority found the complex consistently open (97.5%), providing satisfactory care (89%). Most respondents (81%) received all necessary medicines, and 77.3% confirmed the availability of medical instruments. Awareness of antenatal care services was high, majority knew about pregnancy registration and check-ups. Among the respondents 51.5% were good aware and nearly half of respondents (48.5%) were poor aware about ANC related services provided from upazilla health complex. ***Conclusion*:** The findings of the current study indicate a strong awareness of antenatal care services among the majority of respondents.

Keywords: Level of Awareness, Pregnant Women, Antenatal Care Services, Upazila Hospital, and Bangladesh.

INTRODUCTION

Antenatal care (ANC) is crucial for the health and survival of both the mother and the child. The most common danger signs during pregnancy, increasing the risk of maternal deaths, include vaginal bleeding, convulsions or fits, high fever, abdominal pain, severe headache, blurred vision, absence of fetal movements, gush of fluid from the vagina, and foul-smelling vaginal discharge [1]. Antenatal care services strive to distinguish between pregnant women at low risk and those at high risk, based on their past and present pregnancy histories or clinical factors, in order to prevent adverse outcomes in this high-risk group [2]. However, it is important to note that adverse pregnancy outcomes can also occur in women without identifiable risk factors. In fact, a higher number of pregnant women without risk factors have experienced serious adverse outcomes compared to those with risk factors during antenatal care [3]. Thus, preventive interventions should target all pregnant women in antenatal care services and during childbirth globally and especially in

developing countries [4]. Health knowledge plays a critical role in enabling women to understand their health status and the importance of appropriate antenatal care (ANC). Implementing interventions that focus on the knowledge, attitude, and practice of ANC in pregnant women has shown to be effective [5]. Such interventions should include a package of interlocking systems comprising early screening, administration of preventive prophylactic therapy, and effective treatment of various detected risk conditions to reduce maternal complications. Research has shown that the level of awareness and utilization of ANC services among pregnant women is influenced by various factors, including socio-demographic characteristics like age, education, and socio-economic status. Knowledge about ANC, its importance, and practices such as proper diet and supplementation during pregnancy are found to be higher among certain groups such as primigravidas, younger educated women, and those from better socio-economic backgrounds [6]. The quality of ANC services and pregnant women's perception of these services are key determinants of their satisfaction and compliance. It has been observed that most women attending ANC clinics hold a positive attitude towards these services and practice adequate care, yet there remains a need for health intervention programs aimed at improving maternal health practices [7]. Several demographic and socio-cultural factors, including maternal age, number of living children, education, place of residence, and ethnicity, significantly influence the use of ANC services [8]. Furthermore, barriers such as lack of awareness, socio-economic constraints, and perception of poor quality of care can result in delayed or insufficient utilization of ANC services. Educational interventions are effective in enhancing awareness and willingness among pregnant women to access ANC services. For instance, health education interventions have been shown to significantly increase knowledge and willingness to access antenatal care services [9]. The role of ANC in early detection and management of potential risks during pregnancy is critical for preventing maternal and infant mortality. Emphasis on delivering information on recognizing serious problems during pregnancy and involving pregnant women in decision-making processes can improve the quality of ANC service provision [10]. Enhancing awareness among pregnant women about antenatal care services is crucial for ensuring maternal and child health. A comprehensive approach that includes education, quality of care, and addressing socio-economic and cultural barriers is essential to enhance the effectiveness of antenatal care services globally.

Objectives: To assess the level of awareness among pregnant women regarding Antenatal Care Services.

METHODS

This descriptive cross-sectional study was conducted at 3 Upazilla health complexes: Hussainpur upazilla health complex, Karimganj upazilla health complex and Pakundia upazilla health complex, Kishorganj, Bangladesh, during the period from 1st January 2020 to 31st December 2020. A total of 163 pregnant women were interviewed from 3 upazilla health complex Kishorganj were included in this study. The respondents were so enthusiastic that there was no missing data in this study. A semi-structured questionnaire was developed according to the variable and data were collected by face to face interview of the respondents. Data were cleaned, edited and analyzed with Statistical Packages for Social Sciences version 22.

Inclusion Criteria:

- Married pregnant women with or without children attending upazilla health complex for antenatal care.
- Client who gave written consent to participate in the study.
- Clients who had made at least one visit (including the present visit).

Exclusion Criteria:

- Not willing to participate.
- Who are severely weak.

RESULTS

Table I presents the demographic characteristics of the respondents. Among the respondents, most of the pregnant women were within 18-23 years of age (54.6%). 37.4 percent of women belonged to the age group of 24-29 years. Only 8.0% respondents belonged to the age group of 30 years and above. Their minimum age was 18 years and maximum age was 35 years. The mean age and the standard deviation of the respondents who came to upazilla health complex was 23.38 years and ±3.659 respectively. Most of the respondents (40.5%) were belonged to the group of SSC, while 20.2% respondents were in the group of class 6-10. Only 9.2% respondents were illiterate. 14.1% respondents had the education of higher secondary and above. Among the respondents most (82.2%) of the pregnant women were house wives, while 9.8% respondents were service holder. Only 3.0% pregnant women were served as day labor. Involvement of other form of works like spin thread were 4.9%. Among the respondents most (75.5%) of the pregnant women never took betel leaf. 9.2% respondents took betel leaf regularly while the rest 15.3% took irregularly. Table-II demonstrates the distribution of the respondents by the source of information about the upazilla health complex services. Among the respondents 70.6% and 11.7% had got the information about the services of upazilla health complex from healthcare personnel and their neighbour. 8.0% respondents informed from their family member and 9.8% informed by media about the services of upazilla health complex. Table-III shows the distribution of the respondents by their opinion about upazilla health

complex. Majority of the respondents (97.5%) said that upazilla health complex was always open during their visit. Very few (2.5%) respondents got upazilla health complex open in sometimes during their visit. Among the respondents most of them (95.1%) told that health care provider was always availabe at upazilla health complex when they come for service. Sometimes the healthcare provider was available at upazilla health complex told only 4.9%. Most of the respondents (89.0%) thought that the healthcare provider take enough care during providing health service to them. The average level of health service is provided by 10.4% healthcare provider. Among the respondents majority (81.0%) told that they got all medicine for their treatment. Few respondents (19.0%) told that they didn't get all medicine for treatment. Among the respondents majority of them (77.3%) thought that instruments are available at upazilla health complex for health service. 22.7% respondents did not know about availability of instruments for health service. Table-IV presents the distribution of the respondents by their awareness about ANC services provided through upazilla health complex. Among the respondents 95% knew about the pregnancy registration and medical check-up during pregnancy. 93% knew about measurement of weight. 80-90% pregnant women knew about providing of iron/folic acid, TT vaccination, measurement of height, measurement of blood pressure.79% respondents knew about pregnancy related investigation. 69% respondents knew about examination of anaemia and availability NVD. Only 57% respondents knew about examination edema from upazilla health complex. Figure 1 demonstrates the distribution of the respondents according to their awareness. Awareness Category was done on the basis of 11 questions. The minimum score of the scale was 0 and maximum score was 11. The maximum total score of the study found on the basis of eleven question was 11 and minimum score was 3. On the basis of tertile, awareness were categorized into two group Good aware and Poor aware. Among the respondents 51.5% were good aware and nearly half of respondents (48.5%) were poor aware about ANC related services provided from upazilla health complex.

Table-I: Demographic characteristics of the study subjects (N=163)

Characteristics	**Frequency**	**Percentage**
Age Category		
18-23 years	89	54.6
24-29 years	61	37.4
30-35 years	13	8
Mean± SD	23.38 ±3.659	
Educational Status		
Illiterate	15	9.2
Class 1-5	7	4.3
Primary pass	19	11.7
Class 6-10	33	20.2
SSC	66	40.5
HSC and above	23	14.1
Occupational status		
House wife	134	82.2
Day labor	5	3
Service holder	16	9.8
Others	8	4.9
Habit of Smoking or betel leaf/nut		
Regular	15	9.2
Irregular	25	15.3
Never	123	75.5

Table-II: Distribution of the respondents by the source of information about the upazilla health complex services (N=163)

Source of information	**Frequency**	**Percentage**
Health care personnel	115	70.6
Family member	13	8.0
Neighbor	19	11.7
Media	16	9.8

Table-III: Distribution of the respondents by their opinion about upazilla health complex (N=163)

Parameters	**Frequency**	**Percentage**
Opening status of Upazilla health complex		

Always get open	159	97.5
Sometimes	4	2.5
Presence of healthcare provider		
Always available	155	95.1
Sometimes	8	4.9
Caring attitude of healthcare personnel		
Don't take care	1	0.6
Take enough care	145	89
Average	17	10.4
Availability of medicine		
Get all needed medicine	132	81
Didn't get all medicine	31	19
Availability of instruments		
Available	126	77.3
Unknown	37	22.7

Table-IV: Distribution of the respondents by their awareness about ANC services provided through upazilla health complex (N=163)

ANC services	Frequency	Percentage
Pregnancy registration		
No	7	4.3
Yes	156	95.7
Medical check up during pregnancy		
No	7	4.3
Yes	156	95.7
Pregnancy related investigation		
No	34	20.9
Yes	129	79.1
Providing iron / folic acid		
No	16	9.8
Yes	147	90.2
TT vaccination		
No	21	12.9
Yes	142	87.1
Measurement of weight		
No	11	6.7
Yes	152	93.3
Measurement of height		
No	19	11.7
Yes	144	88.3
Measurement of Blood pressure		
No	17	10.4
Yes	146	89.6
Examination of anaemia		
No	49	30.1
Yes	114	69.9
Examination of edema		
No	70	42.9
Yes	93	57.1
Availability of NVD		
No	50	30.7
Yes	113	69.3

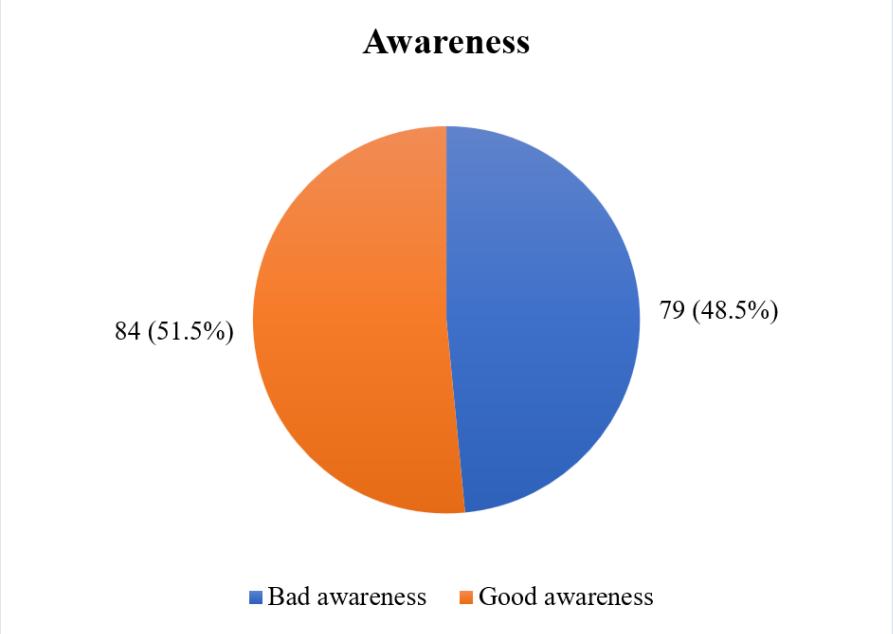

Figure 1: Distribution of the respondents according to their awareness (N=163)

DISCUSSION

This descriptive cross-sectional study was conducted at 3 Upazilla health complexes, Kishorganj, Bangladesh, during the period from 1st January 2020 to 31st December 2020 to assess the level of awareness among pregnant women regarding Antenatal Care Services. A total of 163 pregnant women were interviewed from 3 upazilla health complex Kishorganj were included in this study. The majority of respondents were young, predominantly aged 18-23 years (54.6%), with 37.4% between 24-29 years, and a smaller group over 30 years (8.0%). This reflects findings in other regions where age and educational levels significantly influence health service access [11, 12]. Regarding education, 40.5% of respondents had secondary school completion (SSC), 20.2% had some secondary education (class 6-10), and only 9.2% were illiterate. This distribution highlights the educational gradient in ANC knowledge and utilization, confirming that higher education correlates with better awareness and use of ANC services [13, 14]. The primary sources of information about ANC services were healthcare personnel (70.6%) and neighbors (11.7%), emphasizing the role of community-based strategies and healthcare interactions in information dissemination. This is consistent with findings from other regions where community-based strategies and healthcare provider interactions play crucial roles in disseminating information about maternal health services [11-14]. This underlines the importance of community health workers and the need for effective communication strategies within healthcare settings. The current study reported high satisfaction levels with the upazilla health complex's availability (97.5% found it always open) and accessibility of healthcare providers (95.1% found providers always available). However, gaps in medication supply (81.0% received all necessary medicines) and availability of health instruments (77.3% found instruments available) were matter of concerns, However, areas for improvement remain, such as ensuring consistent supply of medications and health instruments, as also noted in studies from Ethiopia and Nigeria where similar challenges impacted patient satisfaction and service utilization [15]. Awareness levels of specific ANC services were generally high: Among the respondents 95% knew about the pregnancy registration and medical check-up during pregnancy. 93% knew about measurement of weight. 80-90% pregnant women knew about providing of iron/folic acid, TT vaccination, measurement of height, measurement of blood pressure.79% respondents knew about pregnancy related investigation. 69% respondents knew about examination of anaemia and availability NVD. Only 57% respondents knew about examination edema from upazilla health complex. Among the respondents 51.5% were good aware and nearly half of respondents (48.5%) were poor aware about ANC related services provided from upazilla health complex. These findings are crucial as knowledge of ANC components is directly linked to better pregnancy outcomes by enabling timely detection and management of complications [16, 17]. Similar findings were found in other studies [11-19]. In a study conducted by Gupta RK *et al*., [11], revealed that the respondents had adequate knowledge about ANC services except for the minimum number of visits for ANC. Another study conducted by Akhtar S. *et al*., [18], stated that majority of the pregnant women had knowledge about antenatal care. This current study underscores the need for comprehensive, culturally appropriate health education and strong community networks to support pregnant

women. Addressing service delivery gaps and improving the quality of ANC services are essential for improving maternal and neonatal health outcomes.

Limitations of the Study

Time was limited for assessing the level of satisfaction of the respondents. All required size of sample could not be collected due to short time period. Samples were collected conveniently from selected upazilla health complex of Kishorganj district. Study had been carried out at 3 upazilla health complex of a district. So, the results of this study may not represent overall picture of the country.

CONCLUSION AND RECOMMENDATIONS

The findings of the current study indicate a strong awareness of antenatal care services among the majority of respondents. The health complex effectively maintains consistent operational hours and availability of healthcare providers, ensuring reliable access to necessary medical services and treatments. While most pregnant women are well-informed about essential antenatal procedures and support available, ongoing efforts to educate and disseminate information through various channels continue to be crucial for enhancing healthcare outcomes. Improving communication strategies could further increase awareness and satisfaction levels, especially regarding less understood services.

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