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Unveiling maternal and child health situation: a survey among women attending antenatal clinic of a tertiary care hospital of Bangladesh

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ABSTRACT

Background: Maternal and child health (MCH) is a cornerstone of public health, yet comprehensive data on antenatal care, child health practices, and delivery outcomes remain limited in Bangladesh. This study aimed to assess the MCH situation among women attending a tertiary care hospital. **Methods & Material:** Data on sociodemographic characteristics, reproductive history, child care practices, antenatal visits, and delivery outcomes were collected using structured interviews and analyzed descriptively. **Results:** The mean age of respondents was 26.56 ± 4.7 years, with 83.5% aged 17–30 years. Most women had secondary (35.0%) or primary (33.7%) education. Housewives constituted 93.0% of the participants, and 82.2% had 1–2 children. Nuclear (47.0%) and joint (46.3%) families were common. Regarding socioeconomic status, 44.1% belonged to the upper class and 41.5% to the middle class, with a mean monthly household income of BDT 22,998.91 ± 11,641.31. Almost all youngest children (99.3%) were under five years old (mean 33.95 ± 13.99 months), with 53.3% males. Colostrum feeding was reported in 97.2% of cases. Complete immunization was observed in 90.2%, while 5.2% of families experienced child death in the last five years, mainly due to pneumonia and unknown causes. **Conclusion:** Most women accessed antenatal care and institutional delivery, with high rates of colostrum feeding and child immunization. However, gaps in antenatal coverage, home deliveries, and child mortality highlight areas for targeted interventions to improve maternal and child health outcomes in Bangladesh.

Keywords: *Maternal and child health (MCH), Situation, Banglades*

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INTRODUCTION

Maternal and child health (MCH) remains a cornerstone of public health, particularly in low- and middle-income countries (LMICs) where preventable maternal and child deaths continue to pose a serious challenge. Over the past few decades, Bangladesh has made commendable progress in improving MCH indicators, reflecting the success of national and community-based health initiatives. The neonatal mortality rate declined from 52 per 1,000 live births in 1993 to 16 per 1,000 in 2022, while under-five mortality decreased from 144 to 28 per 1,000 during the same period [1]. Despite these encouraging trends, significant challenges persist in ensuring equitable access to quality maternal and newborn care. Recent reports indicate that Bangladesh still experiences more than 100,000 child deaths and around 63,000 stillbirths annually, underscoring ongoing service delivery and health system gaps [2].

Antenatal care (ANC) plays a pivotal role in safeguarding maternal and neonatal health by enabling early detection of complications, providing essential health education, and ensuring continuity of care from pregnancy to delivery [3]. Nevertheless, less than half of pregnant women in Bangladesh attend the recommended minimum of four ANC visits, and wide disparities exist across socioeconomic and geographic strata [4]. Moreover, the quality of ANC and delivery services remains uneven, with many births still occurring at home or under unskilled supervision [2]. The shortage of trained midwives and the limited availability of 24-hour emergency obstetric and neonatal care services further compound these challenges [5]. Social determinants such as early marriage, gender inequality, and poverty continue to exacerbate maternal and child vulnerabilities [6].

Given this context, there is a pressing need to understand the current maternal and child health situation among women utilizing antenatal services in tertiary-level health facilities. A hospital-based survey provides a valuable opportunity to assess health-seeking behaviours, awareness, utilisation patterns, and barriers that influence maternal and child health outcomes. This study, titled “Unveiling maternal and child health situation: a survey among women attending antenatal clinic of a tertiary care hospital of Bangladesh.

METHODS & MATERIAL

It was a cross-sectional descriptive type of observational study. This study was conducted during January 2026 to June 2026. The sample size was 460 patients in the study. This study was conducted in the antenatal clinic of Model Family Planning Clinic and outpatient department (OPD) of the department of Obstetrics and Gynaecology, City Medical College Hospital, Bangladesh. Women of reproductive age having at least one living child, attending the antenatal clinic of Model Family Planning Clinic and outpatient department (OPD) of the department of Obstetrics and Gynaecology, City Medical College Hospital, Bangladesh.

Inclusion criteria

Women of reproductive age
Having at least one living child
Seeking antenatal care
Attending the antenatal clinic of Model Family Planning Clinic and outpatient department (OPD) of the department of Obstetrics and Gynaecology, City Medical College Hospital, Bangladesh.

Exclusion criteria

Severely ill women
Women who were not interested to provide information

Data collection technique

The data were collected from the respondents by face-to-face interview using a semi-structured questionnaire, after taking informed verbal consent from the participants.

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Method of analysis of data

After collection of data, questionnaires were checked for incompleteness, incorrectness and inconsistency. Updated data were entered into Statistical Package for Social Sciences (SPSS) software version 20.0 and analyzed. Qualitative variables were summarized by percentage and quantitative variables were summarized by mean and standard deviation (SD). The findings of the study were presented in tables, pie chart and bar diagram.

Ethical considerations

Approval for the study was obtained from the Departmental Protocol Review Committee of the Department of Community Medicine and Public Health of City Medical College. Informed verbal consent was taken from the respondents before data collection. The anonymity of the respondents and confidentiality of data were maintained all through.

RESULTS

More than half 245 (53.3%) women's youngest child were male child and the remaining 215 (46.7%) women's youngest child were female. The maximum respondents 384 (83.5%) were in the age group of 17-30 years followed by 74 (16.1%) in 31-45 years and 2 (0.4%) were above 45 years. Mean age of the respondents was 26.56 years with a standard deviation (SD) of 4.7 years. The highest number of respondents 161 (35.0%) had secondary level of education followed by 155 (33.7%) had primary, 57 (12.4%) higher secondary and 47 (10.2%) had graduation or above. Forty (8.7%) women had no formal education. The most of the respondents 428 (35.0%) were housewives followed by 20 (4.3%) were service holder, each 5 (1.1%) were teacher or run business. Two (0.4%) were tailor (*Table I*).

Table I

Age of the respondents (*n*=460).

Sex	Frequency (n)	Percentage (%)
Male	245	53.3
Female	215	46.7
Age		
17-30	384	83.5
31-45	74	16.1
> 45	2	0.4
Educational status		
No formal education	40	8.7
Primary	155	33.7
Secondary	161	35.0
Higher Secondary	57	12.4
Graduate or above	47	10.2
Occupation		
Housewife	428	93.0
Service	20	4.3
Business	5	1.1
Teacher	5	1.1
Tailor	2	0.4

The maximum 378 (82.2%) respondents had 1-2 children while 82 (17.8%) had >2 children (*Table II*).

Table II

Number of living children of the respondents (*n*=460).

Number living children	Frequency (n)	Percentage (%)
1-2	378	82.2
>2	82	17.8
Total	460	100.0

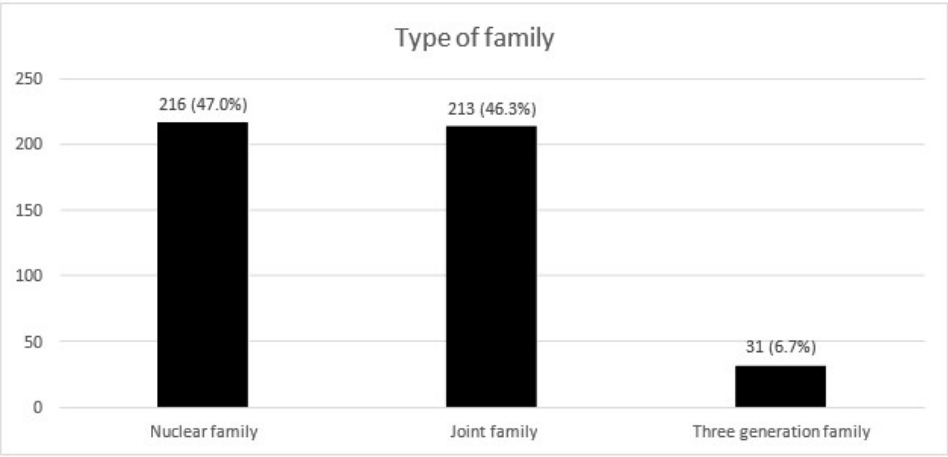

Figure 1 Bar diagram showing type of family among the respondents (*n*=460)

Nuclear family was found among 216 (47.0%) women followed by joint family among 213 (46.3%) and 31 (6.7%) women had three generation family (*Figure 1*).
The highest number of the respondents 203 (44.1%) were in upper class while 191 (41.5%) were in middle class and 66 (14.3%) in lower class (according to categorization of household income of Bangladesh). Mean monthly household income of the women was BDT 22998.91 with a standard deviation (SD) of BDT 11641.31 (*Table III*).

Table III
Monthly family income of the respondents in BDT (*n*=460).

Income groups	Frequency (n)	Percentage (%)
Lower class (BDT <12900)	66	14.3
Middle class (BDT 12900-21500)	191	41.5
Upper class (BDT >21500)	203	44.1
Total	460	100.0

Age of the last or youngest child of the most of the women 457 (99.3%) was within 5 years; only 3 (0.7%) women had youngest child of more than 5 years. Mean age the youngest child was 33.95 months with a standard deviation (SD) of 13.99 months (*Table IV*).

Table IV
Age of the youngest child of the respondents (*n*=460).

Age of the youngest child in years	Frequency (n)	Percentage (%)
0-5	457	99.3
>5	3	0.7
Total	460	100.0

The most of the youngest children 447 (97.2%) were given colostrum as a first food and the rest 13 (2.8%) were given other foods. Among other foods each 6 (1.3%) were given honey and 1 (0.2%) was given sugar water as a first food (*Figure 2*).

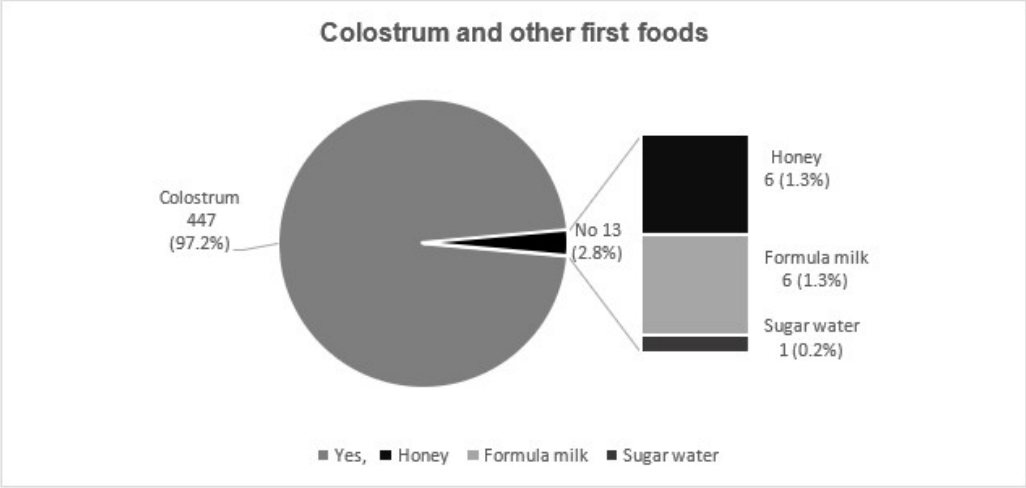

Figure 2 Bar of Pie chart showing Colostrum and other first foods given to the youngest child of the respondents (*n*=460)

Immunization of 415 (90.2%) youngest children were completed, while that of 45 (9.8%) were incomplete. Causes of incompleteness were ongoing vaccination (29; 64.4%), drop out (15; 33.3%) and left out (1; 2.2%) (*Table V*).

Table V
Immunization status of the youngest child of the respondents.

Completion of immunization (n=460)	Category	Frequency (n)	Percentage (%)
	Yes	**415**	**90.2**
	No	**45**	**9.8**
Cause of incompleteness (n=47)	Ongoing	29	64.4
	Drop out	15	33.3
	Left out	1	2.2

There was child death in 24 (5.2%) families during last five years. Causes of death were unknown (9; 37.5%), pneumonia (8; 33.3%), drowning (3; 12.5%), diarrhoea (2; 8.3%) and congenital heart disease (2; 8.3%) (*Table VI*).

Table VI
Child death during last five years.

	Category	Frequency (n)	Percentage (%)
Death of child during last five years (n=460)	**Yes**	**24**	**5.2**
	No	**436**	**94.8**
Cause of child death (n=24)	Unknown	9	37.5
	Pneumonia	8	33.3
	Drowning	3	12.5
	Diarrhoea	2	8.3
	Congenital heart disease	2	8.3

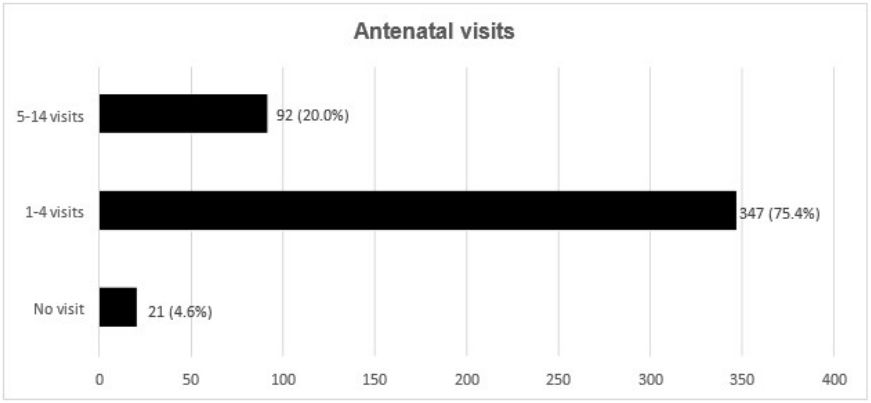

Figure 3 Bar diagram showing antenatal visits of respondents (*n*=460)

Figure 3 revealed that 21 (4.6%) women did not take any antennal care. The majority of the women had antenatal visits of 1-4 and 92 (20.0%) had 5-14 antenatal visits. Mean antenatal visit was 3.48 with a standard deviation (SD) of ±2.082.

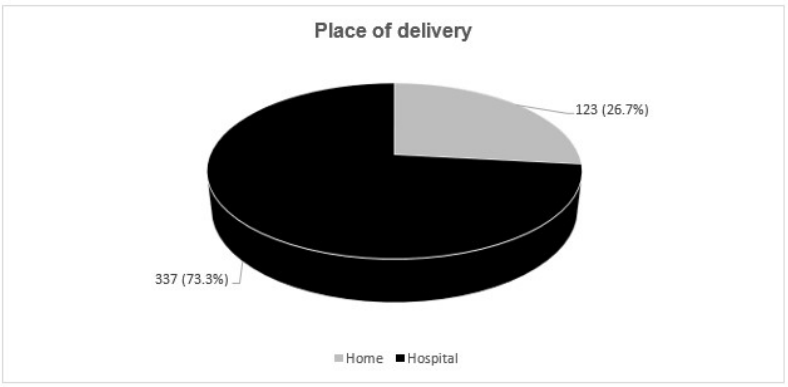

Figure 4 Pie chart showing place of delivery of the respondents (*n*=460)

Child birth of about three-fourth (337; 73.3%) of the respondents were conducted in hospitals and that of 123 (26.7%) were conducted at home (*Figure 4*).



Figure 5 Bar diagram showing mode of delivery (*n*=460)

More than half 263 (57.2%) respondents underwent LUCS and the rest 197 (42.8%) had NVD (*Figure 5*).

Delivery of the majority of the respondents 339 (73.7%) were conducted by doctors. Other personnel conducted delivery were nurse 21 (4.6%), FWV 4 (0.9%), CSBA 20 (4.3%), TTBA 65 (14.1%) and relatives 11 (2.4%) (*Table VII*).

Table VII
Personnel who conducted delivery of the respondents (*n*=460)

Personnel conducted delivery	Frequency (n)	Percentage (%)
Doctor	339	73.7
Nurse	21	4.6
FWV	4	0.9
CSBA	20	4.3
TTBA	65	14.1
Relatives	11	2.4
Total	460	100.0

DISCUSSION

This study explored the maternal and child health situation among women attending the Model Family Planning Clinic of City Medical College Hospital. The findings revealed that the majority of respondents were young mothers, aged between 17 and 30 years (83.5%), with a mean age of 26.6 years. This reflects the reproductive age pattern observed in Bangladesh, where early marriage and childbearing remain common [7]. The concentration of women in this age group suggests an ongoing need for targeted reproductive health education and services for younger women.

Educational attainment among respondents was moderate, with most women having secondary (35%) or primary (33.7%) education. Although literacy rates among Bangladeshi women have improved, limited higher education still poses barriers to informed decision-making about maternal and child health [8]. The predominance of housewives (93%) further illustrates traditional gender roles, which often limit women's economic empowerment and health autonomy [9].

Most respondents (82.2%) had one or two children, consistent with the declining fertility rate in Bangladesh, now at 2.0 [10]. Nearly equal proportions of nuclear (47%) and joint (46.3%) families indicate a transitional family structure, influencing childcare practices and health-seeking behavior [11]. The mean household income (BDT 22,999) placed most respondents in the middle or upper socioeconomic class, potentially explaining the relatively good access to institutional delivery and immunization services.

Encouragingly, 97.2% of mothers reported giving colostrum to their newborns and 90.2% had completed child immunization, aligning with national trends showing progress in maternal and child health indicators [12]. However, incomplete immunization in nearly 10% highlights persistent service gaps, mainly due to dropout or ongoing schedules.

Despite high institutional delivery (73.3%) and doctor-assisted births (73.7%), the cesarean section rate (57.2%) was alarmingly high, exceeding WHO's recommended limit of 10–15% [13]. This overmedicalization of childbirth raises concerns about unnecessary surgical interventions and associated risks. Additionally, the 5.2% child death rate within five years—mostly from preventable causes like pneumonia and diarrhoea underscores ongoing public health challenges.

Overall, the findings illustrate significant achievements in antenatal care and child immunization but reveal areas requiring policy attention, particularly in rationalizing cesarean deliveries, ensuring complete immunization, and addressing preventable child deaths. Continued community awareness, maternal education, and equitable healthcare access are essential to sustaining Bangladesh's progress in maternal and child health.

CONCLUSION

This survey highlights the current maternal and child health situation among women attending the antenatal clinic of Mymensingh Medical College Hospital. Most participants were young mothers with moderate education and stable socioeconomic backgrounds. Encouragingly, the majority received antenatal care, delivered in hospitals under professional supervision, and ensured timely immunization and breastfeeding for their children. However, gaps remain in health education, completion of immunization, and the persistence of home deliveries. The high rate of cesarean sections also raises concern regarding the rational use of obstetric interventions. Overall, the findings reflect improving maternal and child health practices in an urban tertiary setting, yet underline the continued need for targeted interventions to achieve equitable and sustainable health outcomes.

FUNDING

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CONFLICT OF INTEREST

None declared

ETHICAL CONSIDERATION

The study was approved by ethical review committee.

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