

ORIGINAL ARTICLE

Assessing Knowledge, Attitudes and Practices of Self-care During Pregnancy in Chattogram District of Bangladesh

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ABSTRACT

Introduction: Self-care during pregnancy is crucial for preventing complications and improving maternal and fetal outcomes, particularly in low- and middle-income countries. Understanding pregnant women's knowledge, attitudes and practices is essential for strengthening antenatal care. **Objective:** This study was aimed to assess the knowledge, attitudes and practices of self-care during pregnancy among women attending antenatal clinics at a tertiary care hospital in Chattogram, Bangladesh. **Methods & Materials:** A questionnaire-based cross-sectional study was conducted at the Department of Obstetrics and Gynaecology, Chittagong Medical College Hospital, Chittagong, Bangladesh, from June 2024 to July 2025. A total of 165 pregnant women were included in this study. Data on sociodemographic characteristics, maternal history and self-care-related knowledge, attitudes and practices were collected. Statistical analysis was performed using SPSS version 25.0. **Results:** Most participants were aged 20–25 years (44.2%) and were housewives (79.4%). Over half of the participants resided in rural areas (52.7%) and 54.5% were multiparous. Awareness of self-care during pregnancy was high (95.8%) and 72.7% of participants attended antenatal care regularly. Positive attitudes toward folic acid supplementation and medication safety were observed in 77.6% and 82.4% of the participants, respectively. However, knowledge of recommended antenatal visits (33.3%) and home-based monitoring, including blood glucose (36.4%) and urine protein testing (20.0%), was limited. **Conclusion:** Although pregnant women showed favorable awareness and attitudes toward self-care, significant gaps in specific practices remain. Enhancing antenatal counseling with emphasis on practical self-care skills may improve maternal health outcomes.

Keywords: Self-care, pregnancy, antenatal care, knowledge, attitudes, practices

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INTRODUCTION

Self-care during pregnancy has gained increasing global attention as an essential component of maternal health promotion and complication prevention. The World Health Organization defines self-care as the ability of individuals, families and communities to promote health, prevent disease and manage illness with or without the support of healthcare providers [1]. During pregnancy, self-care encompasses a wide range of behaviors, including timely antenatal care attendance, balanced nutrition, micronutrient supplementation, safe medication practices, physical activity,

symptom management and monitoring of health indicators such as blood pressure and blood glucose.

Evidence consistently demonstrates that inadequate self-care during pregnancy contributes to preventable maternal and neonatal morbidity and mortality, particularly in low- and middle-income countries (LMICs) [2,3]. Studies have shown that women's knowledge and attitudes toward self-care strongly influence their engagement in protective behaviors and timely healthcare-seeking [4]. Conversely, gaps in awareness and misconceptions may result in delayed recognition of complications such as pre-eclampsia, gestational diabetes, anemia and infections [5].

Knowledge, attitude and practice (KAP) studies conducted across diverse settings reveal considerable variation in maternal self-care behaviors. Research from China and Ethiopia has shown that although antenatal care utilization may be high, a detailed understanding of recommended visits, danger signs and home-based monitoring remains limited [6,7]. Similarly, studies from African and Middle Eastern countries indicate that pregnant women often lack confidence in managing common pregnancy symptoms and rely heavily on informal advice or passive coping strategies [8,9].

Medication use during pregnancy represents a particularly critical dimension of self-care. While appropriate pharmacological management is essential for maternal health, irrational medication use and self-medication pose significant risks to fetal development [10]. Several studies have documented that inadequate counseling and poor health literacy contribute to unsafe medication practices among pregnant women, even among those attending antenatal clinics [11,12]. Conversely, structured antenatal counseling has been shown to improve medication-related knowledge and promote safer self-care behaviors [13].

Bangladesh has made substantial progress in improving maternal health indicators over the past decades, particularly through expanded antenatal care coverage. However, maternal mortality and morbidity remain concerns and evidence suggest that the quality and comprehensiveness of antenatal education vary widely [14]. Data on pregnant women’s self-care knowledge and practices are limited, particularly in the southeastern region of the country. Chattogram, one of the largest metropolitan areas of Bangladesh, serves a diverse population with varying educational and socioeconomic backgrounds, making it a critical setting for assessing maternal self-care behaviors.

Understanding pregnant women’s knowledge, attitudes and practices related to self-care is essential for identifying gaps that may compromise maternal health outcomes. Such evidence can inform targeted interventions, strengthen antenatal counseling strategies and support the integration of self-care promotion into routine maternal healthcare services.

OBJECTIVES

The objective of this study was to assess the knowledge, attitudes and practices related to self-care during pregnancy among women attending antenatal care at a tertiary care hospital in Chattogram, Bangladesh.

METHODS & MATERIALS

This questionnaire-based cross-sectional study was conducted at the Department of Obstetrics and Gynaecology, Chittagong Medical College Hospital, Chittagong, Bangladesh. The study period extended from June 2024 to July 2025. A total of 165 pregnant women attending antenatal care services at the

study site during the data collection period were included in this study.

Inclusion criteria

1. Pregnant women attending antenatal clinics at Chittagong Medical College Hospital
2. Gestational age ≥12 weeks
3. Willingness to participate and provide informed consent

Exclusion criteria

1. Critically ill pregnant women requiring emergency care
2. Women with severe cognitive or communication impairments

Data Collection Procedure

Data were collected using a structured, pretested questionnaire designed to assess sociodemographic characteristics, maternal and obstetric history and knowledge, attitudes and practices related to self-care during pregnancy. The questionnaire was developed based on existing literature and relevant guidelines on maternal self-care. Face-to-face interviews were conducted by trained data collectors to ensure completeness and clarity of responses. Before data collection, the questionnaire was pilot tested to assess clarity, relevance and internal consistency and necessary modifications were made. Each participant was interviewed in a private setting within the antenatal clinic to ensure confidentiality and minimize response bias. Data accuracy and consistency were maintained through daily supervision and cross-checking of completed questionnaires. Informed consent was secured from all participants before enrollment. Participants were assured of confidentiality, anonymity and their right to withdraw from the study at any point without affecting their care.

Statistical Analysis

Data were entered and analyzed using Statistical Package for Social Sciences (SPSS) version 25.0. Descriptive statistics, including frequencies, percentages, means and standard deviations, were used to summarize participant characteristics and responses.

RESULTS

Table I presents sociodemographic profiles of 165 pregnant women. Most belonged to the 20–25 years age group (44.2%), followed by the 25–30 years (24.8%). Adolescents aged 16–19 years constituted 17.6%, while 13.3% were 30–35 years. Secondary and higher secondary education were most common (26.7% each) and 4.8% were illiterate. Most were housewives (79.4%), while others were in service (7.9%) or studying (10.9%). About half resided in rural areas (52.7%), with 47.3% in urban settings.

Table – I: Sociodemographic Characteristics of Participants (n=165)

Characteristic	Frequency (n)	Percentage (%)	
Age group (years)	16-19	29	17.6
	20-25 years	73	44.2
	25-30 years	41	24.8
	30-35 years	22	13.3
Education	Illiterate	8	4.8
	Primary	41	24.8
	Secondary	44	26.7
	Higher Secondary	44	26.7
	Graduate	28	17.0
Occupation	Housewife	131	79.4
	Service	13	7.9

	Student	18	10.9
	Others	3	1.8
Residence	Rural	87	52.7
	Urban	78	47.3

Table II describes maternal and obstetric characteristics. Mean gestational age was 28.4 ± 6.2 weeks. Over half were multiparous (54.5%) and 35.8% primiparous. Planned pregnancies were reported by 83.6%. An adverse obstetric

history was present in 21.8%. Nearly half experienced vaginal delivery (49.1%), whereas 20.6% had a cesarean section. Comorbidities included diabetes (9.1%), anemia (4.8%) and hypertension (3.0%).

Table - II: Maternal characteristics of study participant (n=165)

Maternal Characteristics		Frequency (n)	Percentage (%)
Gestational age (weeks)		28.4 ± 6.2	
Parity	Primipara	59	35.8
	Multipara	90	54.5
Planning of pregnancy	Yes	138	83.6
	No	27	16.4
Bad Obstetric History	Yes	36	21.8
	No	129	78.2
Type of Delivery	Vaginal	81	49.1
	Cesarean section	34	20.6
Comorbidity	Diabetes	15	9.1
	Hypertension	5	3.0
	Anemia	8	4.8
	hemobilia	1	0.6
	chochlatecyst	1	0.6
	hypothyroidism	1	0.6

Table III outlines knowledge and perceptions of pregnancy self-care. Regular antenatal care was reported by 72.7%. Most believed self-care was very important during pregnancy (95.8%) and that antenatal care reduced complications (79.4%). Positive attitudes toward folic acid supplementation

were observed in 77.6%, while 77.0% avoided medication without medical advice. Dietary modifications were practiced by 70.9%. Self-care for common pregnancy symptoms was reported by 48.5% and 78.2% would practice self-care in future pregnancies.

Table - III: Knowledge of Self-Care During Pregnancy Among Participants (n = 165)

Indicator	Positive Responses (n)	Percentage (%)
Attended ANC visits regularly	120	72.7
Belief that self-care is very important during pregnancy	158	95.8
Positive attitude toward folic acid supplementation	128	77.6
Belief that ANC reduces pregnancy complications	131	79.4
Avoidance of medication without doctor's advice	127	77.0
Practice of dietary and lifestyle modification	117	70.9
Engagement in self-care for common pregnancy symptoms	80	48.5
Willingness to practice self-care in future pregnancies	129	78.2

Table IV presents domain-specific knowledge and practices. Overall, 74.5% reported self-care knowledge and 68.5% knew it reduces complications. Knowledge of recommended antenatal visits was 33.3%. Awareness of folic acid use was 58.8% and medication safety knowledge was 82.4%.

Knowledge of home monitoring included blood pressure (53.3%), blood glucose (36.4%) and urine protein monitoring (20.0%). Knowledge of pregnancy symptoms was high (90.9%), with non-pharmacological management awareness at 51.5%.

Table - IV: Positive Attitudes and Practices Related to Self-Care During Pregnancy (n = 165)

Knowledge Domain	Positive Responses (n)	Percentage (%)
Knowledge of self-care during pregnancy	123	74.5
Awareness that self-care reduces pregnancy complications	113	68.5
Knowledge of recommended ANC visits	55	33.3
Knowledge of folic acid use before and during early pregnancy	97	58.8
Awareness of medication safety during pregnancy	136	82.4
Knowledge of home blood pressure monitoring	88	53.3
Knowledge of home blood glucose monitoring	60	36.4
Knowledge of urine protein self-monitoring	33	20.0
Knowledge of common pregnancy symptoms	150	90.9
Knowledge of non-pharmacological symptom management	85	51.5

DISCUSSION

The present study provides insight into the knowledge, attitudes and practices related to self-care during pregnancy among women attending antenatal services in a tertiary care hospital in Chattogram, Bangladesh. Overall, the findings demonstrate relatively high awareness of the importance of self-care, antenatal care attendance and medication safety, while notable gaps persist in specific domains such as home-based monitoring and management of common pregnancy symptoms.

The high proportion of participants recognizing the importance of self-care during pregnancy aligns with global evidence emphasizing increasing awareness among pregnant women regarding their role in maintaining maternal health. Dong et al. reported similarly high perceived importance of self-care among pregnant and postpartum women, suggesting a broader shift toward patient-centered maternal health behaviors [4]. In the present study, nearly three-quarters of participants reported regular antenatal care attendance, which is consistent with findings from Wang et al., who highlighted antenatal visits as a key determinant of improved maternal knowledge and preventive practices [6]. This reflects the expanding reach of antenatal services in low- and middle-income countries, including Bangladesh.

Positive attitudes toward folic acid supplementation and avoidance of medication without medical advice observed in this study mirror findings from Navaro et al. and Obi and Anosike, who reported that awareness of medication safety during pregnancy was significantly associated with formal antenatal counseling [10,15]. However, despite relatively high awareness, gaps in practical application remain evident. Engagement in self-care for common pregnancy symptoms was reported by less than half of the participants, indicating that knowledge does not always translate into practice. Similar discrepancies between knowledge and behavior have been documented by Shehata et al., who noted that pregnant women often rely on passive coping strategies rather than active self-care for minor discomforts [8].

The study also revealed limited knowledge regarding recommended numbers of antenatal care visits, with only one-third of participants demonstrating accurate awareness. This finding is consistent with Li et al., who observed that although women attended antenatal services, a detailed understanding of antenatal schedules and preventive components remained insufficient [5]. Such gaps may reduce the effectiveness of antenatal care by limiting women's ability to seek timely and appropriate services.

Home-based monitoring practices represented another area of deficiency. Knowledge of blood pressure, blood glucose and urine protein self-monitoring was particularly low. Similar patterns have been reported in studies from Ethiopia and China, where limited access to devices, insufficient training and low perceived necessity were identified as barriers to home monitoring during pregnancy [7,13]. Given the rising burden of hypertensive disorders and gestational diabetes, inadequate awareness of these practices may delay early detection and intervention.

The high level of awareness regarding medication safety observed in this study is encouraging and aligns with findings from Kazma et al. and Goruntla et al., who demonstrated improved caution toward medication use during pregnancy among women receiving structured antenatal counseling [16,17]. Nevertheless, evidence from Atmadani et al. and Girmaw et al. indicates that self-medication remains prevalent in similar settings, suggesting that continuous reinforcement of safe medication practices is essential [11,12].

Sociodemographic characteristics, including education level and residence, may partially explain the observed variability in knowledge and practices. Oechsle et al. demonstrated that higher educational attainment was associated with improved health literacy and self-care behaviors during pregnancy [18]. Although this study did not explore associations analytically, the relatively high proportion of women with secondary or higher education may have contributed to the favorable knowledge levels observed.

Overall, the findings underscore the importance of strengthening antenatal education beyond basic awareness, with greater emphasis on practical skill development, symptom management and home-based monitoring. Structured health education interventions significantly improved knowledge–attitude–practice outcomes among pregnant women, supporting the need for targeted educational strategies within routine antenatal care. Integrating self-care counseling into antenatal services may therefore enhance maternal empowerment and contribute to improved pregnancy outcomes.

CONCLUSION

This study demonstrates that pregnant women attending antenatal care in Chattogram exhibit generally positive knowledge and attitudes toward self-care during pregnancy. However, important gaps remain in practical self-care behaviors, particularly in symptom management and home-based health monitoring. Strengthening antenatal education with a focus on actionable self-care practices may enhance maternal empowerment and contribute to improved pregnancy outcomes.

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Conflicts of interest: There are no conflicts of interest.

Ethical approval: The study was approved by the Institutional Ethics Committee.

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